1981

FOURTH QUARTER DATA EXCHANGE

CANADIAN CONTRIBUTION

POPLAR RIVER
COOPERATIVE MONITORING
ARRANGEMENT

1981
FOURTH QUARTER DATA EXCHANGE
CANADIAN CONTRIBUTION

MARCH, 1982

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PREAMBLE

The Technical Monitoring Schedule lists those water quality, water quantity and air quality monitoring locations and parameters which form the basis for information exchange and reporting to governments. The Committee structure is described in the Poplar River Cooperative Monitoring Arrangement.

The monitoring locations and parameters listed herein have been reviewed by the Poplar River Bilateral Monitoring Committee and represent the basic technical information needed to identify any definitive changes in water quality, water quantity and air quality at the international boundary. The Schedule will be submitted to governments for approval as an attachment to the 1981 report to governments. Changes in the sampling locations and parameters may be made by governments based on the recommendations of the Committee.

Significant additional information is being collected by agencies on both sides of the international boundary, primarily for project management or basin-wide baseline data purposes. This additional information is usually available upon request from the collecting agency and forms part of the pool of technical information which may be drawn upon by governments for specific study purposes. Examples of additional information are water quality, water quantity, groundwater and air quality data collected at points in the Poplar River basin not of direct concern to the Committee. In addition, supplemental information on parameters such as vegetation and soils, fish population, waterfowl and aquatic vegetation is also being collected on either a routine or specific studies basis by various agencies.

POPLAR RIVER

COOPERATIVE MONITORING ARRANGEMENT

TECHNICAL MONITORING SCHEDULE

CANADA

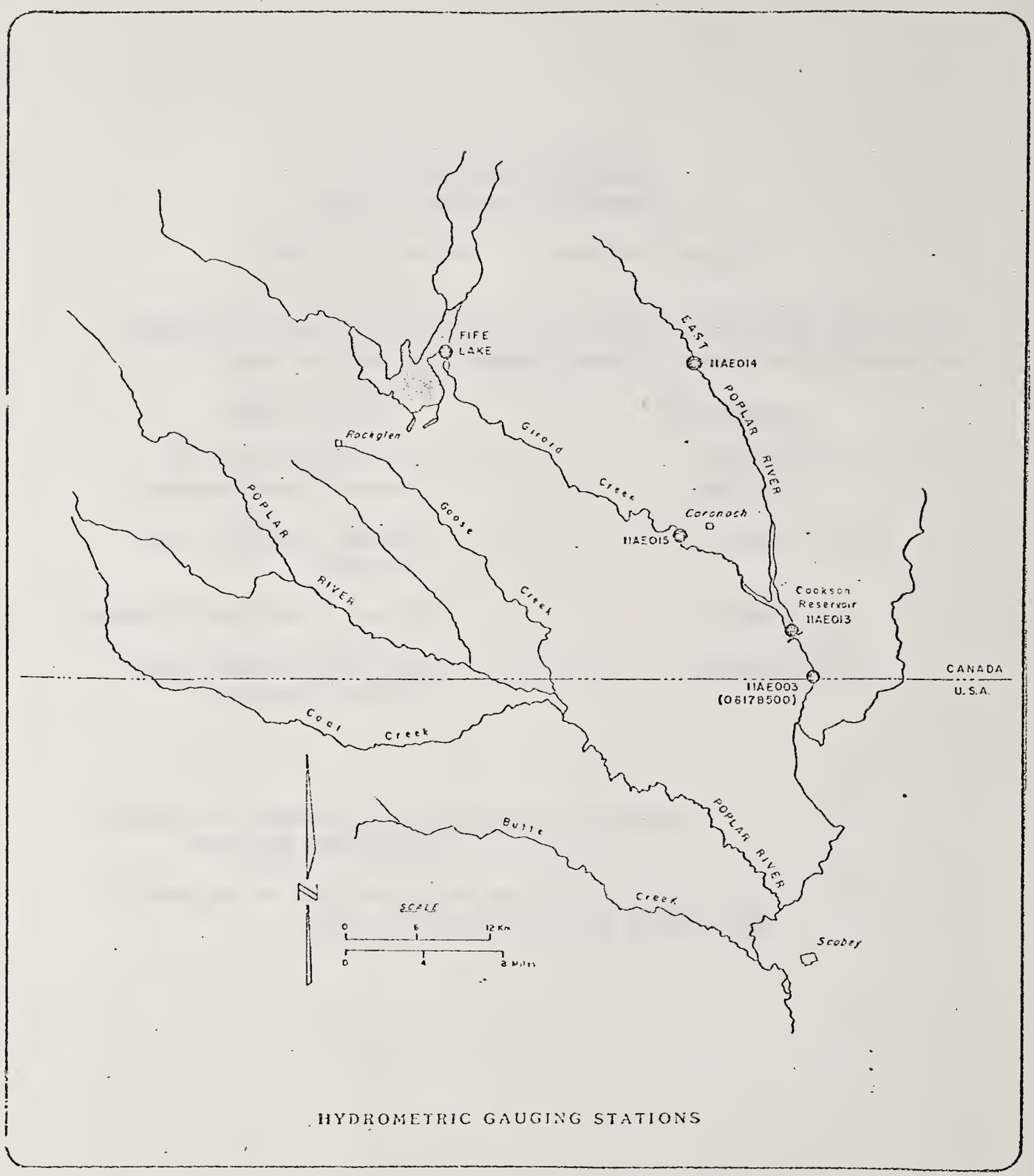
STREAMFLOW MONITORING
AT HYDROMETRIC GAUGING STATIONS

Responsible Agency: Environment Canada

Daily mean discharge or levels and instantaneous monthly extremes as normally published in surface water data publications.

	Station No.	Station Name
1.	11AE003 (06178500)	East Poplar River at International Boundary
2.	11AE013	Cookson Reservoir near Coronach
3.	11AE015	Girard Creek near Coronach
4.	11AE014	East Poplar River above Cookson Reservoir
5.	*	Responsible Agency: Saskatchewan Environment Fife Lake Overflow

* - Miscellaneous measurements of outflow to be made by SDOE during periods of outflow only.



HYDROMETRIC GAUGING STATIONS

EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

STATION NO. 11AE003

(PRELIMINARY) DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	0.082	0.074 B	0.088	0.102	0.311	0.088	0.068	0.065	0.062	0.068	0.071	0.079	1
2	0.079	0.074 B	0.088	0.096	0.311	0.201	0.065	0.068	0.071	0.071	0.071	0.079	2
3	0.076 B	0.074 B	0.088	0.091	0.311	0.266	0.062	0.065	0.059	0.074	0.074	0.079	3
4	0.071 B	0.074 B	0.091	0.091	0.283	0.272	0.065	0.068	0.059	0.071	0.079	0.082	4
5	0.071 B	0.074 B	0.091	0.085	0.261	0.263	0.062	0.071	0.068	0.071	0.071	0.079	5
6	0.074 B	0.074 B	0.088	0.093	0.252	0.283	0.062	0.076	0.059	0.074	0.071	0.079	6
7	0.074 B	0.074 B	0.088	0.096	0.311	0.283	0.062	0.071	0.062	0.071	0.076	0.085	7
8	0.074 B	0.071 B	0.088	0.093	0.311	0.283	0.062	0.065	0.068	0.071	0.071	0.082	8
9	0.071 B	0.071 B	0.088	0.085	0.269	0.283	0.059	0.062	0.068	0.071	0.074	0.082	9
10	0.071 B	0.071 B	0.091	0.085	0.283	0.280	0.059	0.062	0.065	0.071	0.074	0.082	10
11	0.074 B	0.071 B	0.093	0.082	0.278	0.280	0.062	0.062	0.062	0.074	0.074	0.079	11
12	0.074 B	0.071 B	0.093	0.088	0.280	0.283	0.062	0.062	0.062	0.099	0.076	0.079	12
13	0.074 B	0.074 B	0.093	0.085	0.278	0.340	0.059	0.065	0.062	0.096	0.076	0.076	13
14	0.074 B	0.076	0.096 A	0.085	0.275	0.311	0.076	0.065	0.062	0.085	0.076	0.074	14
15	0.074 B	0.099	0.096 A	0.085	0.269	0.258	0.071	0.074	0.059	0.074	0.076	0.074	15
16	0.074 B	0.113	0.096 A	0.093	0.275	0.130	0.071	0.071	0.059	0.074	0.074	0.074	16
17	0.074 B	0.130	0.093 A	0.105	0.278	0.110	0.065	0.068	0.062	0.085	0.076	0.074	17
18	0.074 B	0.116	0.093 A	0.093	0.263	0.088	0.065	0.065	0.065	0.068	0.085	0.074	18
19	0.076	0.102	0.091 A	0.088	0.275	0.079	0.065	0.062	0.065	0.079	0.082	0.074	19
20	0.076	0.105	0.093 A	0.091	0.278	0.082	0.065	0.062	0.068	0.088	0.079	0.074	20
21	0.076	0.099	0.088 A	0.105	0.235	0.085	0.065	0.068	0.065	0.076	0.079	0.074	21
22	0.079	0.093	0.088 A	0.108	0.127	0.079	0.062	0.068	0.065	0.071	0.079	0.074	22
23	0.079	0.093	0.093 A	0.096	0.105	0.079	0.062	0.071	0.065	0.071	0.079	0.076	23
24	0.079	0.093	0.093 A	0.096	0.093	0.076	0.062	0.071	0.062	0.074	0.079	0.079	24
25	0.082	0.088	0.093 A	0.181	0.085	0.076	0.065	0.071	0.074	0.074	0.079	0.085	25
26	0.079	0.088	0.091 A	0.249	0.079	0.074	0.062	0.074	0.079	0.076	0.079	0.085	26
27	0.079	0.088	0.096	0.266	0.079	0.071	0.062	0.071	0.065	0.074	0.079	0.085	27
28	0.079	0.088	0.102	0.311	0.079	0.071	0.062	0.065	0.062	0.068	0.079	0.082	28
29	0.076		0.099	0.340	0.076	0.068	0.068	0.068	0.062	0.071	0.079	0.079	29
30	0.076		0.102	0.311	0.071	0.065	0.068	0.071	0.062	0.074	0.079	0.079	30
31	0.076		0.105		0.071		0.065	0.068		0.068		0.079	31
TOTAL	2.347	2.418	2.876	3.875	6.752	5.207	1.990	2.095	1.928	2.332	2.296	2.437	TOTAL
MEAN	0.076	0.086	0.093	0.129	0.218	0.174	0.064	0.068	0.064	0.075	0.077	0.079	MEAN
DAM3	203	209	248	335	583	450	172	181	167	201	198	211	DAM3
MAX	0.082	0.130	0.105	0.340	0.311	0.340	0.076	0.076	0.079	0.099	0.085	0.085	MAX
MIN	0.071	0.071	0.088	0.082	0.071	0.065	0.059	0.062	0.059	0.068	0.071	0.074	MIN

SUMMARY FOR THE MONTHS JAN TO DEC
MEAN DISCHARGE, 0.100 M3/S
TOTAL DISCHARGE, 3160 DAM3
MAXIMUM DAILY DISCHARGE, 0.340 M3/S ON APR 29
MINIMUM DAILY DISCHARGE, 0.059 M3/S ON JUL 9

A-MANUAL GAUGE
B-ICE CONDITIONS

WATER SURVEY OF CANADA
FEB 01 1982 PAGE 7
REGINA, SASK.

COOKSON RESERVOIR NEAR CORONACH

STATION NO. 11AE6

(PRELIMINARY) DAILY WATER LEVEL IN METRES FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	752.033	751.990 E	752.471	752.527	752.444	752.291	752.220	752.093	751.978 A	751.797	751.777	751.817	1
2	752.029	751.988 E	752.475	752.525	752.442	752.292	752.215	752.098	751.974 A	751.800	751.779	751.819	2
3	752.026	751.987 A	752.488	752.523	752.432	752.289	752.212	752.098	751.962	751.796	751.787	751.820	3
4	752.024	751.990	752.492	752.517	752.426	752.286	752.212	752.094	751.957	751.793	751.788	751.821	4
5	752.026	751.989	752.490	752.513	752.413	752.283	752.206	752.090	751.955	751.791	751.785	751.822	5
6	752.022 A	751.986	752.488	752.505	752.399	752.277	752.201	752.085	751.951	751.787	751.787	751.831	6
7	752.021 E	751.976	752.491	752.502	752.386	752.271	752.193	752.082	751.947	751.786	751.786	751.839	7
8	752.020 E	751.972	752.494	752.501	752.383	752.268	752.173	752.074	751.946	751.783	751.779	751.840	8
9	752.018 E	751.968	752.497	752.496	752.367	752.263	752.167	752.070	751.947	751.783	751.781	751.838	9
10	752.017 E	751.964	752.495	752.494	752.362	752.258	752.161	752.069	751.937	751.782	751.785	751.843	10
11	752.016 E	751.961	752.493	752.485	752.357	752.253	752.154	752.066	751.928	751.779	751.785	751.846	11
12	752.014 E	751.965	752.499	752.482	752.353	752.249	752.157	752.061	751.925	751.785	751.787	751.845	12
13	752.013 E	751.968	752.500	752.475	752.350	752.251	752.156	752.055	751.914	751.789	751.787	751.844	13
14	752.012 E	751.974	752.504	752.474	752.349	752.257	752.167	752.048	751.903	751.790	751.784	751.844	14
15	752.011 E	751.982	752.508	752.479	752.350	752.251	752.159	752.048	751.893	751.792	751.782 A	751.850	15
16	752.010 E	752.033	752.511	752.476	752.338	752.249	752.156	752.045	751.884	751.795	751.785	751.852	16
17	752.008 E	752.155	752.506	752.474	752.328	752.243	752.154	752.042	751.877	751.790	751.784	751.854	17
18	752.007 E	752.245	752.506	752.473	752.322	752.238	752.152	752.039	751.876	751.787	751.796	751.852	18
19	752.006 E	752.356	752.509	752.464	752.316	752.237	752.155	752.035	751.869	751.789	751.795 A	751.856	19
20	752.004 E	752.414	752.507	752.458	752.320	752.239	752.153	752.032	751.855	751.780	751.792 A	751.860	20
21	752.003 E	752.435	752.506	752.461	752.320	752.238	752.149	752.038	751.847	751.774	751.798	751.856	21
22	752.002 E	752.450	752.510	752.461	752.318	752.238	752.144	752.036	751.841	751.768	751.799	751.855	22
23	752.001 E	752.461	752.518	752.472	752.306	752.233	752.139	752.031	751.836	751.768	751.798	751.857	23
24	752.000 E	752.464	752.516	752.478	752.300	752.230	752.128	752.028	751.829	751.769	751.806	751.857	24
25	751.998 E	752.464	752.517	752.475	752.299	752.227	752.121	752.025	751.824	751.767	751.809	751.859	25
26	751.997 E	752.468	752.513	752.468	752.297	752.223	752.114	752.022	751.815	751.772	751.813	751.861	26
27	751.996 E	752.467	752.518	752.466	752.293	752.221	752.109	752.016	751.809	751.771	751.810	751.859	27
28	751.994 E	752.470	752.524	752.462	752.291	752.215	752.104	752.010	751.809	751.775	751.809	751.862	28
29	751.993 E		752.524	752.458	752.289	752.217	752.107	752.009	751.803	751.778	751.815	751.863	29
30	751.992 E		752.524	752.454	752.287	752.222	752.102	752.000	751.800	751.773	751.818	751.866	30
31	751.991 E		752.529		752.284		752.095	751.987		751.773		751.866	31
TOTAL	23312.304	21060.542	23327.623	22574.498	23322.721	22567.509	23316.835	23313.526	22556.691	23305.262	22553.786	23307.254	TOTAL
MEAN	752.010	752.162	752.504	752.483	752.346	752.250	752.156	752.049	751.890	751.783	751.793	751.847	MEAN
MAX	752.033	752.470	752.529	752.527	752.444	752.292	752.220	752.098	751.978	751.800	751.818	751.866	MAX
MIN	751.991	751.961	752.471	752.454	752.284	752.215	752.095	751.987	751.800	751.767	751.777	751.817	MIN

SUMMARY FOR THE YEAR 1981

MAXIMUM DAILY WATER LEVEL, 752.529 METRES ON MAR 31

MINIMUM DAILY WATER LEVEL, 751.767 METRES ON OCT 25
MAXIMUM INSTANTANEOUS WATER LEVEL, METRES AT ON
WATER LEVELS ARE REFERRED TO GEODETIC SURVEY OF CANADA DATUM

A-MANUAL GAUGE

E-ESTIMATED

GIRARD CREEK NEAR CORONACH

STATION NO. 11AE015

(PRELIMINARY) DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0.242	0.120	0.093	0.138	0.183	0.093	0.097	0.097	0.105		1
2			0.209	0.129	0.123	0.127	0.196	0.080	0.106	0.074	0.108 A		2
3			0.199	0.118	0.121	0.120	0.200	0.093	0.105	0.070			3
4			0.184	0.116	0.123	0.125	0.177	0.091	0.108	0.074			4
5			0.179	0.116	0.130	0.130	0.202	0.099	0.111	0.081			5
6			0.175	0.118	0.128	0.130	0.234	0.127	0.112	0.082			6
7			0.172	0.115	0.140	0.135	0.211	0.092	0.116	0.086			7
8			0.168	0.113	0.141	0.152	0.222	0.082	0.116	0.106			8
9			0.167	0.116	0.130	0.152	0.224	0.075	0.124	0.123			9
10			0.161	0.116	0.127	0.150	0.223	0.087	0.121	0.109			10
11			0.160	0.116	0.122	0.148	0.224	0.081	0.132	0.108			11
12			0.157	0.117	0.119	0.147	0.234	0.086	0.137	0.138			12
13			0.159	0.115	0.116	0.184	0.236	0.090	0.121	0.149			13
14			0.150	0.114	0.118	0.185	0.268	0.099	0.105	0.132			14
15			0.145	0.114	0.115	0.163	0.219	0.107	0.086	0.144			15
16			0.137	0.114	0.119	0.153	0.181	0.104	0.091	0.138			16
17			0.131	0.113	0.115	0.142	0.166	0.097	0.103	0.139			17
18			0.105	0.118	0.121	0.126	0.136	0.099	0.100	0.145			18
19		0.958 A	0.107	0.121	0.114	0.123	0.103	0.100	0.102	0.160			19
20		1.31	0.135	0.123	0.104	0.125	0.100	0.101	0.109	0.103			20
21		0.763	0.186	0.131	0.115	0.135	0.091	0.098	0.106	0.104			21
22		0.656	0.132	0.122	0.115	0.128	0.091	0.076	0.103	0.104			22
23		0.550	0.129	0.118	0.113	0.139	0.106	0.073	0.139	0.134			23
24		0.418	0.122	0.120	0.115	0.136	0.103	0.064	0.094	0.112			24
25		0.301	0.121	0.122	0.117	0.134	0.097	0.097	0.100	0.110			25
26		0.273	0.123	0.120	0.117	0.142	0.093	0.101	0.106	0.115			26
27		0.304	0.120	0.121	0.114	0.151	0.096	0.114	0.101	0.111			27
28		0.231	0.119	0.128	0.122	0.160	0.096	0.094	0.118	0.110			28
29			0.118	0.087	0.119	0.158	0.097	0.092	0.103	0.110			29
30			0.119	0.084	0.119	0.169	0.092	0.083	0.105	0.106			30
31			0.127		0.120		0.095	0.080		0.105			31
TOTAL			4.658	3.495	3.705	4.307	4.996	2.855	3.277	3.479			TOTAL
MEAN			0.150	0.117	0.120	0.144	0.161	0.092	0.109	0.112			MEAN
DAM3			402	302	320	372	432	247	283	301			DAM3
MAX			0.242	0.131	0.141	0.185	0.268	0.127	0.139	0.160			MAX
MIN			0.105	0.084	0.093	0.120	0.091	0.064	0.086	0.070			MIN

SUMMARY FOR THE MONTHS MAR TO OCT
MEAN DISCHARGE, 0.126 M3/S
TOTAL DISCHARGE, 2660 DAM3
MAXIMUM DAILY DISCHARGE, 0.268 M3/S ON JUL 14
MINIMUM DAILY DISCHARGE, 0.064 M3/S ON AUG 24

A-MANUAL GAUGE

MAXIMUM INSTANTANEOUS DISCHARGE, M3/S AT ON NOT DETERMINED

SIGNIFICANT RUNOFF OCCURRED PRIOR TO FEBRUARY 19

EAST POPLAR RIVER ABOVE COOKSON RESERVOIR

STATION NO. 11AE014

(PRELIMINARY) DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0.018 B	0	0	0	0	0	0	0			1
2			0.010	0	0	0	0	0	0	0			2
3			0.008	0	0	0	0	0	0	0			3
4			0.006	0	0	0	0	0	0	0			4
5			0.004	0	0	0	0	0	0	0			5
6			0.003	0	0	0	0	0	0	0			6
7			0.002	0	0	0	0	0	0	0			7
8			0.003	0	0	0	0	0	0	0			8
9			0.002	0	0	0	0	0	0	0			9
10			0.001	0	0	0	0	0	0	0			10
11			0.001	0	0	0	0	0	0	0			11
12			0	0	0	0	0	0	0	0			12
13			0	0	0	0	0	0	0	0			13
14			0	0	0	0	0	0	0	0			14
15			0	0	0	0	0	0.008	0	0			15
16		3.00 B	0	0	0	0	0	0	0	0			16
17		2.26 B	0	0	0	0	0	0	0	0			17
18		0.577 B	0	0	0	0	0	0	0	0			18
19		0.189 B	0	0	0	0	0	0	0	0			19
20		0.215 B	0	0	0	0	0	0	0	0			20
21		0.200 B	0	0	0	0	0	0	0	0			21
22		0.189 B	0	0	0	0	0	0	0	0			22
23		0.109 B	0	0	0	0	0	0	0	0			23
24		0.075 B	0	0	0	0	0	0	0	0			24
25		0.043 B	0	0	0	0	0	0	0	0			25
26		0.057 B	0	0	0	0	0	0	0	0			26
27		0.029 B	0	0	0	0	0	0	0	0			27
28		0.020 B	0	0	0	0	0	0	0	0			28
29			0	0	0	0	0	0	0	0			29
30			0	0	0	0	0	0	0	0			30
31			0		0		0	0		0			31
TOTAL			0.058	0	0	0	0	0.008	0	0			TOTAL
MEAN			0.002	0	0	0	0	0	0	0			MEAN
DAM3			5.01	0	0	0	0	0.691	0	0			DAM3
MAX			0.018	0	0	0	0	0.008	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT
MEAN DISCHARGE, 0 M3/S
TOTAL DISCHARGE, 5.70 DAM3
MAXIMUM DAILY DISCHARGE, 0.018 M3/S ON MAR 1
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 12

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, M3/S AT ON NOT DETERMINED

SIGNIFICANT RUNOFF OCCURRED PRIOR TO FEBRUARY 16

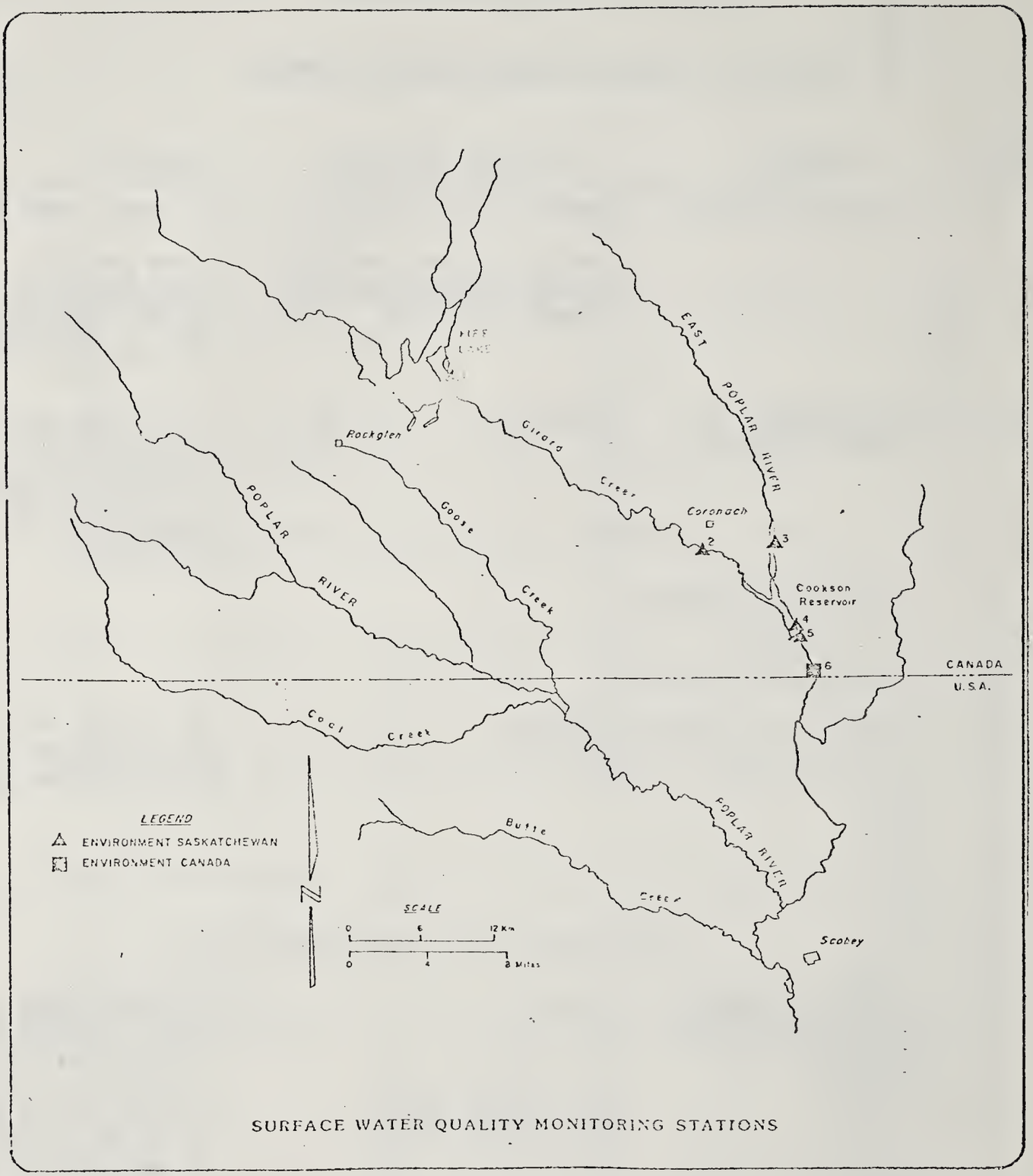
SURFACE WATER QUALITY MONITORING

Responsible Agency: Saskatchewan Environment

No. on Map	Station	Sampling Frequency	Parameters
1.	Fife Lake Overflow	Weekly during overflow.....	pH, cond, temp, B.
		Once during each period of overflow greater than 2 weeks' duration	Above plus D.O., major ions, TDS (calculated), NO_3, TKN, TP, TIC/TOC, TSS, VSS, Tot Col, Fec Col.
2.	Girard Cr. S. of Town of Coronach	Quarterly.....	D.O., Temp, pH, Cond, major ions, TDS, NO_3, B, TKN, TP, TIC/TOC, TSS, VSS, Tot Col, Fec Col, chlorophyll.
3.	Upper end of Cookson Res. @ Hwy 36		
4.	Cookson Res. near dam		
5.	Cookson Res. discharge at concrete pad	Annually..... (Fall)	Cu, Zn, Pb, Ni, Cd, Cr, Al, Hg, Mo, Se, V, As, Oil and grease, F.

Responsible Agency: Environment Canada

6.	East Poplar River at International Boundary	Monthly	pH, Temp, Cond, D.O., Turbidity, Tot Col, Fec Col, chlorophyll A, major ions, nutrients, Ba, Cd, Co, Cu, Ni, Pb, Zn, V, Fe, Mn, As, B, Se, organochlorides, phenoxy herbicides, pyridine herbicides, Hg, Cyanide phenolics, NFR, Al (dissolved), TDS (calculated), SAR (calculated), Cr, NH_3 (free-calculated).



SURFACE WATER QUALITY MONITORING STATIONS

Quarterly Sampling

LOCATION Girard Cr. S. of Town of Coronach

DATE	1980 4th	1981 1st FEB	2nd APR	3rd July	4th DEC
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
B mg/L		1.62	1.55	1.73	1.72
TDS mg/L		1115	1030	941	939
VSS mg/L		3.2	8.5	<0.4	3.2
HCO_3 mg/L		756	652	526	580
CO_3 mg/L				32.5	27
Cl mg/L		5.9	6.3	5.7	7.2
SO_4 mg/L		275	296	267	294
Ca mg/L		82	50.5	21.6	23.5
Mg mg/L		46	50.1	49.8	48.6
K mg/L		7.5	8.5	7.7	8.4
Na mg/L		225	207	220	239
Conductivity US/CM		1570	1460	1350	1417
Fe mg/L		0.27	0.71	0.14	0.26
Mn mg/L		0.13	0.10	0.02	0.07
total hardness mg/L		394.1	323.4	258.96	259
NO_3 as N mg/L		0.23	0.152	0.003	0.275
TKN mg/L		0.62	1.04	0.84	1.17
TP mg/L		0.016	0.068	0.043	0.038
TIC mg/L		177	128	104	153
TOC mg/L		5.3	7.8	12.0	8.7
pH mg/L		7.86	8.18	8.72	8.75
temperature (^oC)		0.0	4.7	20.9	-0.5
D. O. mg/L		9.87	6.65	12.9	
total Coliforms orgs/100 ml		18	L1	17	15
Fecal Coliforms orgs/100 ml		L1	L1	9	2
Chlorophyll mg/m^3		L0.001	0.005	0.001	0.011
TSS mg/L		6.0	30.0	6.0	3.2

Annual Sampling

LOCATION Girard Creek, South of Coronach

DATE	1980 DEC	1981 DEC	1982	1983	1984	1985
AGENCY	SPC	SPC				
PARAMETERS						
Cu mg/L	0.014	0.002				
Zn mg/L	0.012	0.004				
Pb mg/L	L0.004	L0.004				
Ni mg/L	0.012*	0.004*				
Cd mg/L	L0.001	L0.001				
Cr mg/L	0.02	L0.01				
Al mg/L	0.21	0.23				
Hg mg/L	L0.0001	0.0003				
Mo mg/L	L0.05	L0.05				
Se mg/L	L0.0002	L0.0002				
V mg/L	L0.004	L0.004				
As mg/L	0.0039*	0.0013*				
F mg/L	0.36	0.32				
Oil & Grease mg/L	L0.01	2.3				

* SDOE data - Nov.

Surface Water Quality

Quarterly Sampling

LOCATION Upper end of Cookson Res. at Hwy. #36

DATE	1980 4th	1981 1st	2nd	3rd	4th
		FEB	MAY	AUG.	NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
B mg/L		1.23	0.96	1.13	1.20
TDS mg/L		809	710	700	740
VSS mg/L		1.6	23.6	8.4	1.6
HCO_3 mg/L		461	431	451	474
CO_3 mg/L		18.5	3.0	9.0	14.5
Cl mg/L		6.9	6.0	6.4	6.5
SO_4 mg/L		200	191	175	204
Ca mg/L		48	33.4	32.6	34.9
Mg mg/L		43.2	36.1	33.8	38.1
K mg/L		15.5	15.0	12.0	15.5
Na mg/L		159	145	140	156
Conductivity US/CM		1120	1020	1070	1120
Fe mg/L		0.06	0.72	0.65	0.15
Mn mg/L		L0.01	0.04	0.06	0.04
total hardness mg/L		297.7	232.0	220.6	244
NO_3 as N mg/L		0.32	0.073	0.025	0.240
TKN mg/L		1.32	1.3	3.26	1.72
TP mg/L		0.055	0.07	0.28	0.07
TIC mg/L		107	84	88	92
TOC mg/L		12.7	12.8	12.6	14.2
pH mg/L		8.6	8.36	8.48	8.53
temperature (^oC)		1.0	10.1	20.1	0.5
D. O. mg/L		11.9	5.2	3.8	6.0
total Coliforms orgs/100 ml		11	5	13	12
Fecal Coliforms orgs/100 ml		L1	L1	4	L1
Chlorophyll mg/m^3		0.001	0.005	0.004	0.002
TSS mg/L		1.6	28.4	24.8	2.4

Surface Water Quality

Annual Sampling

LOCATION Cookson Reservoir at Hwy. #36

DATE	1980 DEC	1981 DEC	1982	1983	1984	1985
AGENCY	SPC	SPC				
PARAMETERS						
Cu mg/L	0.012	0.004				
Zn mg/L	0.007	0.015				
Pb mg/L	L0.004	0.004				
Ni mg/L	0.012*	0.008*				
Cd mg/L	L0.001	L0.001				
Cr mg/L	0.05	L0.01				
Al mg/L	0.32	0.72				
Hg mg/L	L0.0001	0.0003				
Mo mg/L	L0.05	L0.05				
Se mg/L	0.0008	0.0004				
V mg/L	0.004	L0.004				
As mg/L	0.007*	0.004*				
F mg/L	0.19	0.24				
Oil & Grease mg/L	0.6	3.2				

* SDOE data - Nov.

Surface Water Quality

Quarterly Sampling

LOCATION Cookson Reservoir near dam

DATE	1980 4th NOV	1981 1st FEB	2nd MAY	3rd AUG.	4th NOV
AGENCY	SPC	SPC	SPC	SPC	SPC
PARAMETERS					
B mg/L	1.01	1.22	0.99	1.55	1.25
TDS mg/L	669	767	710	675	740
VSS mg/L	4.6	1.2	4.4	10.4	1.6
HCO_3 mg/L	373	455	409	346	474
CO_3 mg/L	9.0	15.0	19.0	37.0	12.5
Cl mg/L	5.9	6.5	6.0	6.3	6.8
SO_4 mg/L	180	195	191	183	198
Ca mg/L	27.5	47.0	32.4	22.3	32.4
Mg mg/L	34.7	42.2	36.6	32.1	39.3
K mg/L	15.2	14.5	14.5	11.0	17.2
Na mg/L	140	153	143	140	171
Conductivity US/CM	1040	1090	1030	1050	1110
Fe mg/L	0.19	0.07	0.41	0.66	0.15
Mn mg/L	L0.01	L0.01	0.01	0.05	0.02
total hardness mg/L	211.5	291.1	231.6	187.8	243
NO_3 as N mg/L	0.43	0.36	0.085	0.02	0.24
TKN mg/L	1.32	1.16	1.15	2.54	1.55
TP mg/L	0.056	0.051	0.048	0.167	0.060
TIC mg/L	93.0	106.0	86	90	92
TOC mg/L	14.0	12.2	12.9	14.0	14.3
pH mg/L	8.68	8.52	8.56	9.09	8.46
temperature (^oC)	5.0	0.2	10.6	21.4	0.0
D. O. mg/L	10.3	8.06	5.84	5.84	6.24
total Coliforms orgs/100 ml	50	7	6	39	1
Fecal Coliforms orgs/100 ml	L1	L1	L1	15	L1
Chlorophyll mg/m^3		0.002	0.006	0.068	0.006
TSS mg/L	14.0	1.6	11.2	43.2	4.0

Annual Sampling

LOCATION Cookson Reservoir at Dam

DATE	1980 DEC	1981 DEC	1982	1983	1984	1985
AGENCY	SPC	SPC				
PARAMETERS						
Cu mg/L	0.013	0.005				
Zn mg/L	0.009	0.006				
Pb mg/L	L0.004	0.007				
Ni mg/L	0.012*	0.006*				
Cd mg/L	L0.001	L0.001				
Cr mg/L	0.09	L0.01				
Al mg/L	0.2	0.47				
Hg mg/L	L0.0001	0.0001				
Mo mg/L	0.05	L0.05				
Se mg/L	0.0006	0.0003				
V mg/L	0.005	0.004				
As mg/L	0.0076*	0.0039*				
F mg/L	0.18	0.23				
Oil & Grease mg/L	L0.01	1.6				

* SDOE data - Nov.

Quarterly Sampling

LOCATION Cookson Res. discharge at concrete pad

DATE	1980 4th	1981 1st	2nd	3rd	4th
AGENCY		FEB SPC	MAY SPC	AUG. SPC	NOV SPC
PARAMETERS					
B mg/L		1.83	1.07	1.65	1.73
TDS mg/L		1305	771	900	1050
VSS mg/L		2.0	4.0	4.4	2.8
HCO_3 mg/L		667	454	488	627
CO_3 mg/L			7.0	<0.5	
Cl mg/L		8.7	6.0	6.6	7.0
SO_4 mg/L		478	215	322	356
Ca mg/L		110	40.8	50.0	93.0
Mg mg/L		70	39.1	51.0	62.9
K mg/L		9.4	13.5	9.7	8.6
Na mg/L		205	150	147	188
Conductivity US/CM		1780	1130	1480	1550
Fe mg/L		1.03	0.43	0.08	0.93
Mn mg/L		0.15	0.05	0.07	0.24
total hardness mg/L		562.9	262.9	334.9	491
NO_3 as N mg/L		0.4	0.084	0.40	0.139
TKN mg/L		1.08	1.15	3.8	1.19
TP mg/L		0.027	0.037	0.030	0.077
TIC mg/L		157	93	126	127
TOC mg/L		7.4	11.3	5.8	7.0
pH mg/L		7.67	8.45	8.09	7.93
temperature (^oC)		2.0	10.5	15.3	2.6
D. O. mg/L		7.65	5.64	4.6	7.0
total Coliforms orgs/100 ml		9	3	30	L1
Fecal Coliforms orgs/100 ml		2	L1	14	L1
Chlorophyll mg/m^3		0.003	0.002	0.002	0.001
TSS mg/L		4.4	10.8	6.8	6.0

Surface Water Quality

Annual Sampling

LOCATION · Cookson Reservoir, discharge at concrete pad

DATE	1980 DEC	1981 DEC	1982	1983	1984	1985
AGENCY	SPC	SPC				
PARAMETERS						
Cu mg/L	0.012	0.002				
Zn mg/L	0.012	L0.001				
Pb mg/l	L0.004	L0.004				
Ni mg/L	0.015*	0.005*				
Cd mg/L	L0.001	L0.001				
Cr mg/L	L0.01	L0.01				
Al mg/L	0.06	0.22				
Hg mg/L	L0.0001	L0.0001				
Mo mg/L	L0.05	L0.05				
Se mg/L	L0.0002	0.0005				
V mg/L	L0.004	L0.004				
As mg/L	0.0021*	0.0032*				
F mg/L	0.31	0.29				
Oil & Grease mg/L	L0.01	1.8				

*SDOE data - Nov.

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038004664

STATION 00SA11AE0008 EAST POPLAR R. AT INTERNATIONAL BOUNDARY

DATE SAMPLED JAN 20, 1981 1220 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
- UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	7.0		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1520.	TEMPERATURE (DEG C)	0.0
PH (PH UNITS)	7.4	TURBIDITY (J T U)	0.8
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	3.6	TEMPERATURE (DEG C)	20.3
COLOUR (REL UNITS)	10.	PH (PH UNITS)	7.0
RESIDUE N.F. (105 C)	2.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.012	PHOSPHORUS (TOTAL SOLUBLE)	0.008
NITROGEN (TOTAL AS N) *	0.84	NITROGEN (DISS AS N) L	0.79
NITROGEN (DISS NO3+NO2 AS N) F	0.21	CARBON (DISS ORG AS C) F	6.
PHOSPHORUS (PARTICULATE)	L0.006	CARBON (PART ORG AS C) L	0.36
NITROGEN (PART AS N) L	0.05	NITROGEN (DISS AS N) F	0.84
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	9.	FECAL COLIFORM (NO./100 ML)	8.
CHLOROPHYLL A	L0.001		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	L0.001		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1532.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	371.	HARDNESS (TOTAL AS CACO3) *	239.0
STAB INDEX-RYZNAR-PH UNITS *	5.0	CALCIUM (DISS.)	14.9
MAGNESIUM (DISS.)	49.0	SODIUM (DISS.)	212.
POTASSIUM (DISS.)	7.6	CHLORIDE (DISS.)	6.2
FLUORIDE (DISS.)	0.3	SULPHATE (DISS.)	300.
SILICA REACTIVE	15.	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	452.2
TOTAL DISSOLVED SOLIDS *	828.5	SAT INDX-LANGELIER-PH UNITS *	1.0
FREE CO2 *	71.9	PERCENT SODIUM *	65.0
NON CARBONATE HARDNESS *	0.0	SAR	5.97

SAMPLE 038004664

STATION 00SA11AE0008 EAST POPLAR R. AT INTERNATIONAL BOUNDARY

DATE SAMPLED JAN 20, 1981 1220 HOURS CST
SUBMITTER ID 0003

RESULT CODES			
	NV - NO VALUE	IN - INTERFERENCE	
	*. - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE	
	SD - SAMPLE DESTROYED	# - UNUSUAL VALUE	
	L - LAB FILTERED	F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0010	BARIUM	(TOTAL)	0.06
BORON	(DISS)	1.4	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	L0.001
IRON	(DISS.)	0.04	LEAD	(TOTAL)	L0.004
MANGANESE	(DISS.)	0.13	MERCURY (UG/L)	(TOTAL)	L0.02
NICKEL	(TOTAL)	0.003	SELENIUM	(DISS.)	L.0005
VANADIUM	(TOTAL)	L0.001	ZINC	(TOTAL)	L0.001

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4,-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1248	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
ALPHA-BHC	0.001	ALPHA-CHLORDANE	L0.003
GAMMA-CHLORDANE	L0.002	P,P'-DDD	L0.002
P,P'-DDE	L0.001	P,P'-DDT	L0.004
O,P'-DDT	L0.001	DIELDRIN	L0.002
ALPHA-ENDOSULFAN	L0.001	BETA -ENDOSULFAN	L0.003
ENDRIN	L0.002	HEPTACHLOR	L0.001
HEPTACHLOR EPOXIDE	L0.002	LINDANE	L0.001
MCPA	L0.2	METHOXYCHLOR	L0.01
PICLORAM	L0.2	SILVEX	L0.004
MIREX	L0.001	HCB	L0.001

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038004838

STATION 00SA11AE0008 EAST POPLAR R. AT INTERNATIONAL BOUNDARY

DATE SAMPLED FEB 12, 1981 1400 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
- UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	5.7		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1558.	TEMPERATURE (DEG C)	0.0
PH (PH UNITS)	7.4	TURBIDITY (J T U)	NV
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	5.0	TEMPERATURE (DEG C)	19.6
COLOUR (REL UNITS)	20.	PH (PH UNITS)	7.5
RESIDUE N.F. (105 C)	24.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.013	PHOSPHORUS (TOTAL SOLUBLE)	L0.003
NITROGEN (TOTAL AS N) *	0.87	NITROGEN (DISS AS N) L	0.78
NITROGEN (DISS NO3+NO2 AS N) F	0.23	CARBON (DISS ORG AS C) F	6.
PHOSPHORUS (PARTICULATE)	0.013	CARBON (PART ORG AS C) L	0.43
NITROGEN (PART AS N) L	0.09	NITROGEN (DISS AS N) F	0.76
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	L2.	FECAL COLIFORM (NO./100 ML)	L2.
CHLOROPHYLL A	0.007		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	L0.001		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1766.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	385.	HARDNESS (TOTAL AS CACO3) *	304.6
STAB INDEX-RYZNAR-PH UNITS *	4.5	CALCIUM (DISS.)	28.0
MAGNESIUM (DISS.)	57.	SODIUM (DISS.)	195.
POTASSIUM (DISS.)	9.1	CHLORIDE (DISS.)	6.8
FLUORIDE (DISS.)	0.11	SULPHATE (DISS.)	310.
SILICA REACTIVE	16.	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	469.3
TOTAL DISSOLVED SOLIDS *	854.0	SAT INDX-LANGELIER-PH UNITS *	1.5
FREE CO2 *	23.5	PERCENT SODIUM *	57.3
NON CARBONATE HARDNESS *	0.0	SAR	4.86

SAMPLE 038004838

STATION 00SA11AE0008 EAST POPLAR R. AT INTERNATIONAL BOUNDARY

DATE SAMPLED FEB 12, 1981 1400 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
- UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0008	BARIUM	(TOTAL)	0.07
BORON	(DISS)	1.4	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	0.002	COPPER	(TOTAL)	0.002
CYANIDE	(TOTAL)	0.018	IRON	(DISS.)	0.04
LEAD	(TOTAL)	0.011	MANGANESE	(DISS.)	0.21
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	0.005
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	0.001
ZINC	(TOTAL)	0.008			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4,-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1248	L0.00
AROCLOR 1254	L0.002	AROCLOR 1260	L0.00
ALPHA-BHC	0.001	ALPHA-CHLORDANE	L0.003
GAMMA-CHLORDANE	L0.002	P,P'-DDD	L0.00
P,P'-DDE	L0.001	P,P'-DDT	L0.00
O,P'-DDT	L0.001	DIELDRIN	L0.002
ALPHA-ENDOSULFAN	L0.001	BETA -ENDOSULFAN	L0.00
ENDRIN	L0.002	HEPTACHLOR	L0.00
HEPTACHLOR EPOXIDE	L0.002	LINDANE	L0.00
MCPA	L0.2	METHOXYCHLOR	L0.01
PICLORAM	L0.2	SILVEX	L0.00
MIREX	L0.001	HCB	L0.00

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038100174

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED MAR 31, 1981 1250 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
- UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	11.0		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1454.	TEMPERATURE (DEG C)	7.5
PH (PH UNITS)	8.5	TURBIDITY (J T U)	4.3
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	5.9	TEMPERATURE (DEG C)	20.8
COLOUR (REL UNITS)	50.	PH (PH UNITS)	8.1
RESIDUE N.F. (105 C)	24.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.022	PHOSPHORUS (TOTAL SOLUBLE)	0.008
NITROGEN (TOTAL AS N) *	0.54	NITROGEN (DISS AS N) L	0.42
NITROGEN (DISS NO3+NO2 AS N) F	0.06	NITROGEN (TOT AMMONIA AS N)	NV
CARBON (DISS ORG AS C) L	6.8	PHOSPHORUS (PARTICULATE)	0.014
CARBON (PART ORG AS C) L	0.98	NITROGEN (PART AS N) L	0.12
NITROGEN (DISS AS N) F	0.45		
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	14.	FECAL COLIFORM (NO./100 ML)	12.
CHLOROPHYLL A	0.008		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	NV		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1463.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	501.	HARDNESS (TOTAL AS CACO3) *	319.9
STAB INDEX-RYZNAR-PH UNITS *	3.9	CALCIUM (DISS.)	46.5
MAGNESIUM (DISS.)	49.5	SODIUM (DISS.)	212.
POTASSIUM (DISS.)	7.8	CHLORIDE (DISS.)	6.1
FLUORIDE (DISS.)	0.23	SULPHATE (DISS.)	265.
SILICA REACTIVE	9.5	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	610.7
TOTAL DISSOLVED SOLIDS *	897.5	SAT INDX-LANGELIER-PH UNITS *	2.1
FREE CO2 *	7.6	PERCENT SODIUM *	58.3
NON CARBONATE HARDNESS *	0.0		

SAMPLE 038100174

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED MAR 31, 1981 1250 HOURS CST
SUBMITTER ID 0003

RESULT CODES			
	NV - NO VALUE	IN - INTERFERENCE	
	* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE	
	SD - SAMPLE DESTROYED	# - UNUSUAL VALUE	
	L - LAB FILTERED	F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0015	BARIUM	(TOTAL)	L0.05
BORON	(DISS)	1.2	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	0.001
CYANIDE	(TOTAL)	0.013	IRON	(DISS.)	0.08
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.09
MERCURY (UG/L)	(TOTAL)	0.04	NICKEL	(TOTAL)	0.003
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	0.001			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	L0.001
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038100389

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED APR 21, 1981 1415 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
- UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***

DISSOLVED OXYGEN	11.2

*** FIELD LAB RESULT ***

SPEC CONDUCTANCE (US/CM)	1540.	TEMPERATURE (DEG C)	9.5
PH (PH UNITS)	8.1	TURBIDITY (J T U)	3.4

*** PHYSICAL DATA ***

TURBIDITY (J T U)	3.8	TEMPERATURE (DEG C)	19.6
COLOUR (REL UNITS)	30.	PH (PH UNITS)	8.2
RESIDUE N.F. (105 C)	18.		

*** NUTRIENTS ***

PHOSPHORUS (TOTAL AS P)	0.025	PHOSPHORUS (TOTAL SOLUBLE)	0.014
NITROGEN (TOTAL AS N) *	0.46	NITROGEN (DISS AS N) L	0.38
NITROGEN (DISS NO3+NO2 AS N) F	0.01	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	NV	PHOSPHORUS (PARTICULATE)	0.011
CARBON (PART ORG AS C) L	1.1	NITROGEN (PART AS N) L	0.08
NITROGEN (DISS AS N) F	0.35		

*** BIOLOGICAL DATA

TOTAL COLIFORM (NO./100 ML)	4.	FECAL COLIFORM (NO./100 ML)	L2.
CHLOROPHYLL A	0.005		

*** ORGANIC DATA ***

PHENOLIC MATERIAL (UG/L)	L0.001

*** BALANCE DATA AND CALCULATED PARAMETERS ***

SPEC CONDUCTANCE (US/CM)	1555.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	523.	HARDNESS (TOTAL AS CACO3) *	342.4
STAB INDEX-RYZNAR-PH UNITS *	3.8	CALCIUM (DISS.)	41.5
MAGNESIUM (DISS.)	58.	SODIUM (DISS.)	226.
POTASSIUM (DISS.)	8.0	CHLORIDE (DISS.)	6.2
FLUORIDE (DISS.)	0.26	SULPHATE (DISS.)	300.
SILICA REACTIVE	9.4	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	637.5
TOTAL DISSOLVED SOLIDS *	963.2	SAT INDX-LANGELIER-PH UNITS *	2.2
FREE CO2 *	6.3	PERCENT SODIUM *	58.2
NON CARBONATE HARDNESS *	0.0	SAR	5.31

SAMPLE 038100389

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED APR 21, 1981 1415 HOURS CST
SUBMITTER ID 0003

RESULT CODES

NV - NO VALUE	IN - INTERFERENCE
* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE
SD - SAMPLE DESTROYED	$ - UNUSUAL VALUE
L - LAB FILTERED	F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0016	BARIUM	(TOTAL)	0.16
BORON	(DISS)	1.3	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	0.004	COPPER	(TOTAL)	0.006
CYANIDE	(TOTAL)	0.007	IRON	(DISS.)	0.11
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.06
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	NV
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	NV			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.004
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038100740

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED MAY 20, 1981 1200 HOURS CST
SUBMITTER ID 0003

RESULT CODES			
	NV - NO VALUE	IN - INTERFERENCE	
	* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE	
	SD - SAMPLE DESTROYED	$ - UNUSUAL VALUE	
	L - LAB FILTERED	F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	9.5		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1200.	TEMPERATURE (DEG C)	16.0
PH (PH UNITS)	8.1	TURBIDITY (J T U)	3.4
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	3.5	TEMPERATURE (DEG C)	21.2
COLOUR (REL UNITS)	20.	PH (PH UNITS)	8.4
RESIDUE N.F. (105 C)	7.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.033	PHOSPHORUS (TOTAL SOLUBLE)	0.014
NITROGEN (TOTAL AS N) *	0.81	NITROGEN (DISS AS N) L	0.71
NITROGEN (DISS NO3+NO2 AS N) F	0.03	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	11.	PHOSPHORUS (PARTICULATE)	0.019
CARBON (PART ORG AS C) L	0.65	NITROGEN (PART AS N) L	0.10
NITROGEN (DISS AS N) F	0.65		
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	8.	FECAL COLIFORM (NO./100 ML)	8.
CHLOROPHYLL A	0.01		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	L0.001		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1184.	ALKALINITY (PHENOL AS CACO3)	1.4
ALKALINITY (TOTAL AS CACO3)	429.	HARDNESS (TOTAL AS CACO3) *	253.9
STAB INDEX-RYZNAR-PH UNITS *	3.6	CALCIUM (DISS.)	31.6
MAGNESIUM (DISS.)	42.5	SODIUM (DISS.)	166.
POTASSIUM (DISS.)	14.	CHLORIDE (DISS.)	6.1
FLUORIDE (DISS.)	0.29	SULPHATE (DISS.)	214.
SILICA REACTIVE	2.3	HYDROXIDE *	0.0
CARBONATE *	1.7	BICARBONATE *	519.5
TOTAL DISSOLVED SOLIDS *	734.3	SAT INDX-LANGELIER-PH UNITS *	2.4
FREE CO2 *	3.2	PERCENT SODIUM *	57.1
NON CARBONATE HARDNESS *	0.0	SAR	4.53

SAMPLE 038100740

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED MAY 20, 1981 1200 HOURS CST
SUBMITTER ID 0003

RESULT CODES			
	NV - NO VALUE	IN - INTERFERENCE	
	* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE	
	SD - SAMPLE DESTROYED	$ - UNUSUAL VALUE	
	! LAB FILTERED	F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0021	BARIUM	(TOTAL)	0.05
BORON	(DISS)	0.95	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	0.002	COPPER	(TOTAL)	0.003
CYANIDE	(TOTAL)	0.006	IRON	(DISS.)	0.05
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.06
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	NV
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	NV			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	0.03
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.004
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038101031

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED JUN 10, 1981 1140 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
- UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***

DISSOLVED OXYGEN	10.3

*** FIELD LAB RESULT ***

SPEC CONDUCTANCE (US/CM)	1199.	TEMPERATURE (DEG C)	15.
PH (PH UNITS)	9.0	TURBIDITY (J T U)	2.6

*** PHYSICAL DATA ***

TURBIDITY (J T U)	3.2	TEMPERATURE (DEG C)	18.4
COLOUR (REL UNITS)	30.	PH (PH UNITS)	8.3
RESIDUE N.F. (105 C)	3.		

*** NUTRIENTS ***

PHOSPHORUS (TOTAL AS P)	0.027	PHOSPHORUS (TOTAL SOLUBLE)	0.013
NITROGEN (TOTAL AS N) *	0.91	NITROGEN (DISS AS N) L	0.82
NITROGEN (DISS NO3+NO2 AS N) F	0.02	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	11.	PHOSPHORUS (PARTICULATE)	0.014
CARBON (PART ORG AS C) L	0.54	NITROGEN (PART AS N) L	0.09
NITROGEN (DISS AS N) F	0.82		

*** BIOLOGICAL DATA

TOTAL COLIFORM (NO./100 ML)	L2.	FECAL COLIFORM (NO./100 ML)	L2.
CHLOROPHYLL A	0.005		

*** ORGANIC DATA ***

PHENOLIC MATERIAL (UG/L)	0.003

*** BALANCE DATA AND CALCULATED PARAMETERS ***

SPEC CONDUCTANCE (US/CM)	1210.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	428.	HARDNESS (TOTAL AS CACO3) *	302.6
STAB INDEX-RYZNAR-PH UNITS *	3.7	CALCIUM (DISS.)	51.1
MAGNESIUM (DISS.)	42.5	SODIUM (DISS.)	160.
POTASSIUM (DISS.)	14.	CHLORIDE (DISS.)	6.4
FLUORIDE (DISS.)	0.20	SULPHATE (DISS.)	204.
SILICA REACTIVE	3.5	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	521.7
TOTAL DISSOLVED SOLIDS *	733.6	SAT INDX-LANGELIER-PH UNITS *	2.3
FREE CO2 *	4.1	PERCENT SODIUM *	52.1
NON CARBONATE HARDNESS *	0.0		

SAMPLE 038101031

STATION 005A11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED JUN 10, 1991 1140 HOURS CST
SUBMITTER ID 0003

RESULT CODES	NV - NO VALUE	IN - INTERFERENCE	
	* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE	
	SD - SAMPLE DESTROYED	? - UNUSUAL VALUE	
	L - LAB FILTERED	F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0024	BARIUM	(TOTAL)	0.16
BORON	(DISS)	0.99	CADMIUM	(TOTAL)	0.002
COBALT	(TOTAL)	0.004	COPPER	(TOTAL)	0.002
CYANIDE	(TOTAL)	0.009	IRON	(DISS.)	0.11
LEAD	(TOTAL)	0.010	MANGANESE	(DISS.)	0.05
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	NV
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	0.001			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	0.06
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.008
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	0.002	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 0391101552

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED JUL 13, 1981 1300 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
- UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	8.3		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1540.	TEMPERATURE (DEG C)	25.0
PH (PH UNITS)	8.4	TURBIDITY (J T U)	2.2
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	2.5	TEMPERATURE (DEG C)	19.2
COLOUR (REL UNITS)	20.	PH (PH UNITS)	9.3
RESIDUE N.F. (105 C)	4.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.037	PHOSPHORUS (TOTAL SOLUBLE)	0.025
NITROGEN (TOTAL AS N) *	0.52	NITROGEN (DISS AS N) L	0.41
NITROGEN (DISS NO3+NO2 AS N) F	L0.01	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	7.6	PHOSPHORUS (PARTICULATE)	0.012
CARBON (PART ORG AS C) L	0.59	NITROGEN (PART AS N) L	0.11
NITROGEN (DISS AS N) F	0.42		
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	NV	FECAL COLIFORM (NO./100 ML)	4.
CHLOROPHYLL A	0.007		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	0.001		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1457.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	515.	HARDNESS (TOTAL AS CACO3) *	318.8
STAB INDEX-RYZNAR-PH UNITS *	3.7	CALCIUM (DISS.)	37.0
MAGNESIUM (DISS.)	55.	SODIUM (DISS.)	249.
POTASSIUM (DISS.)	8.9	CHLORIDE (DISS.)	6.3
FLUORIDE (DISS.)	0.28	SULPHATE (DISS.)	285.
SILICA REACTIVE	7.9	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	627.8
TOTAL DISSOLVED SOLIDS *	958.4	SAT INDX-LANGELIER-PH UNITS *	2.3
FREE CO2 *	4.9	PERCENT SODIUM *	62.1
NON CARBONATE HARDNESS *	0.0	SAR	6.07

SAMPLE 038101552

STATION 09SA11AE0009 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED JUL 13, 1981 1300 HOURS CST
SUBMITTER ID 0003

RESULT CODES			
	NV - NO VALUE	IN - INTERFERENCE	
	* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE	
	SD - SAMPLE DESTROYED	↑ - UNUSUAL VALUE	
	L - LAB FILTERED	F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0042	BARIUM	(TOTAL)	0.10
BORON	(DISS)	2.1	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	L0.001
CYANIDE	(TOTAL)	0.013	IRON	(DISS.)	0.18
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.07
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	L0.002
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	0.001			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.01
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038102299

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED AUG 10, 1981 1000 HOURS CST
SUBMITTER ID 0003

RESULT CODES NV - NO VALUE IN - INTERFERENCE
* - CALCULATED VALUE IS - INSUFFICIENT SAMPLE
SD - SAMPLE DESTROYED ? - UNUSUAL VALUE
L - LAB FILTERED F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	6.9		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1462.	TEMPERATURE (DEG C)	20.5
PH (PH UNITS)	8.2	TURBIDITY (J T U)	3.2
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	3.8	TEMPERATURE (DEG C)	23.9
COLOUR (REL UNITS)	20.	PH (PH UNITS)	8.2
RESIDUE N.F. (105 C)	6.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.039	PHOSPHORUS (TOTAL SOLUBLE)	0.027
NITROGEN (TOTAL AS N) *	0.49	NITROGEN (DISS AS N) L	0.36
NITROGEN (DISS NO3+NO2 AS N) F	L0.01	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	7.6	PHOSPHORUS (PARTICULATE)	0.012
CARBON (PART ORG AS C) L	0.90	NITROGEN (PART AS N) L	0.13
NITROGEN (DISS AS N) F	0.38		
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	L2.	FECAL COLIFORM (NO./100 ML)	L2.
CHLOROPHYLL A	0.004		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	0.002		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1530.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	499.	HARDNESS (TOTAL AS CACO3) *	299.6
STAB INDEX-RYZNAR-PH UNITS *	3.8	CALCIUM (DISS.)	22.0
MAGNESIUM (DISS.)	57.	SODIUM (DISS.)	212.
POTASSIUM (DISS.)	6.6	CHLORIDE (DISS.)	6.3
FLUORIDE (DISS.)	0.25	SULPHATE (DISS.)	292.
SILICA REACTIVE	12.	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	607.1
TOTAL DISSOLVED SOLIDS *	909.0	SAT INDX-LANGELIER-PH UNITS *	2.2
FREE CO2 *	6.0	PERCENT SODIUM *	60.6
NON CARBONATE HARDNESS *	0.0		

SAR 5.42

SAMPLE 038102299

STATION 009A11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED AUG 10, 1991 1000 HOURS CST
SUBMITTER ID 0003

RESULT CODES: NV - NO VALUE; * - CALCULATED VALUE; SD - SAMPLE DESTROYED; L - LAB FILTERED; IN - INTERFERENCE; IS - INSUFFICIENT SAMPLE; $ - UNUSUAL VALUE; F - FIELD FILTERED

-- VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0043	BARIUM	(TOTAL)	0.07
BORON	(DISS)	2.0	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	0.001
CYANIDE	(TOTAL)	0.008	IRON	(DISS.)	L0.04
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.03
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	0.003
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	0.001
ZINC	(TOTAL)	0.002			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.001
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038103485

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED OCT 05, 1981 1240 HOURS CST
SUBMITTER ID 0003

RESULT CODES	NV - NO VALUE	IN - INTERFERENCE	
	* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE	
	SD - SAMPLE DESTROYED	$ - UNUSUAL VALUE	
	L - LAB FILTERED	F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***

DISSOLVED OXYGEN	9.9		

*** FIELD LAB RESULT ***

SPEC CONDUCTANCE (US/CM)	1480.	TEMPERATURE (DEG C)	8.0
PH (PH UNITS)	8.2	TURBIDITY (J T U)	NV

*** PHYSICAL DATA ***

TURBIDITY (J T U)	1.1	TEMPERATURE (DEG C)	21.2
COLOUR (REL UNITS)	20.	PH (PH UNITS)	8.2
RESIDUE N.F. (105 C)	7.		

*** NUTRIENTS ***

PHOSPHORUS (TOTAL AS P)	0.024	PHOSPHORUS (TOTAL SOLUBLE)	I.S.
NITROGEN (TOTAL AS N) *	0.29	NITROGEN (DISS AS N) L	0.25
NITROGEN (DISS NO3+NO2 AS N) F	0.01	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	5.9	PHOSPHORUS (PARTICULATE)	NV
CARBON (PART ORG AS C) L	0.29	NITROGEN (PART AS N) L	0.04
NITROGEN (DISS AS N) F	0.25		

*** BIOLOGICAL DATA

TOTAL COLIFORM (NO./100 ML)	L2.	FECAL COLIFORM (NO./100 ML)	L2.
CHLOROPHYLL A	0.005		

*** ORGANIC DATA ***

PHENOLIC MATERIAL (UG/L)	L0.001		

*** BALANCE DATA AND CALCULATED PARAMETERS ***

SPEC CONDUCTANCE (US/CM)	1415.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	512.	HARDNESS (TOTAL AS CACO3) *	305.4
STAB INDEX-RYZNAR-PH UNITS *	3.8	CALCIUM (DISS.)	34.9
MAGNESIUM (DISS.)	53.0	SODIUM (DISS.)	190.
POTASSIUM (DISS.)	8.2	CHLORIDE (DISS.)	6.4
FLUORIDE (DISS.)	0.27	SULPHATE (DISS.)	276.
SILICA REACTIVE	6.0	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	624.1
TOTAL DISSOLVED SOLIDS *	882.0	SAT INDX-LANGELIER-PH UNITS *	2.2
FREE CO2 *	6.2	PERCENT SODIUM *	56.7
NON CARBONATE HARDNESS *	0.0		

SAMPLE 038103485

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED OCT 05, 1981 1240 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
\# - UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0015	BARIUM	(TOTAL)	0.08
BORON	(DISS)	1	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	L0.001
CYANIDE	(TOTAL)	L0.00	IRON	(DISS.)	0.06
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.02
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	L0.002
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	0.001
ZINC	(TOTAL)	L0.001			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.00
2,4-DB	L0.009	2,4-DP	L0.00
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.00
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.009
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.00
P,P'-DDT	L0.004	O,P'-DDT	L0.00
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.00
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.00
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.00
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038103764

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED OCT 28, 1981 1145 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
‡ - UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	14.3		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1394.	TEMPERATURE (DEG C)	2.0
PH (PH UNITS)	8.0	TURBIDITY (J T U)	NV
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	4.0	TEMPERATURE (DEG C)	17.3
COLOUR (REL UNITS)	20.	PH (PH UNITS)	7.9
RESIDUE N.F. (105 C)	4.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.13	PHOSPHORUS (TOTAL SOLUBLE)	0.006
NITROGEN (TOTAL AS N) *	0.64	NITROGEN (DISS AS N) L	0.60
NITROGEN (DISS NO3+NO2 AS N) F	0.10	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	6.1	PHOSPHORUS (PARTICULATE)	0.12
CARBON (PART ORG AS C) L	0.30	NITROGEN (PART AS N) L	0.04
NITROGEN (DISS AS N) F	0.62		
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	NV	FECAL COLIFORM (NO./100 ML)	L2.
CHLOROPHYLL A	0.004		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	0.001		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1431.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	506.	HARDNESS (TOTAL AS CACO3) *	201.7
STAB INDEX-RYZNAR-PH UNITS *	0.0	CALCIUM (DISS.)	N.V.
MAGNESIUM (DISS.)	49.0	SODIUM (DISS.)	200.
POTASSIUM (DISS.)	7.5	CHLORIDE (DISS.)	6.0
FLUORIDE (DISS.)	0.28	SULPHATE (DISS.)	288.
SILICA REACTIVE	11.	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	616.8
TOTAL DISSOLVED SOLIDS *	865.8	SAT INDX-LANGELIER-PH UNITS *	0.0
FREE CO2 *	12.2	PERCENT SODIUM *	67.3
NON CARBONATE HARDNESS *	0.0		

SAMPLE 038103764

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED OCT 28, 1981 1145 HOURS CST
SUBMITTER ID 0003

RESULT CODES

NV - NO VALUE	IN - INTERFERENCE
* - CALCULATED VALUE	IS - INSUFFICIENT SAMPLE
SD - SAMPLE DESTROYED	# - UNUSUAL VALUE
L - LAB FILTERED	F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0012	BARIUM	(TOTAL)	0.06
BORON	(DISS)	1.8	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	0.002
CYANIDE	(TOTAL)	0.002	IRON	(DISS.)	0.06
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.07
MERCURY (UG/L)	(TOTAL)	0.08	NICKEL	(TOTAL)	L0.002
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	L0.001			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.003
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE I38104051

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED NOV 16, 1981 1230 HOURS MST
SUBMITTED ID 0003

RESULT CODES			
NV - NO VALUE		IN - INTERFERENCE	
* - CALCULATED VALUE		IS - INSUFFICIENT SAMPLE	
SD - SAMPLE DESTROYED		$ - UNUSUAL VALUE	
L - LAB FILTERED		F - FIELD FILTERED	

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***			
DISSOLVED OXYGEN	12.9		
*** FIELD LAB RESULT ***			
SPEC CONDUCTANCE (US/CM)	1510.	TEMPERATURE (DEG C)	2.0
PH (PH UNITS)	8.2	TURBIDITY (J T U)	7.0
*** PHYSICAL DATA ***			
TURBIDITY (J T U)	3.2	TEMPERATURE (DEG C)	23.6
COLOUR (REL UNITS)	30.	PH (PH UNITS)	8.0
RESIDUE N.F. (105 C)	14.		
*** NUTRIENTS ***			
PHOSPHORUS (TOTAL AS P)	0.013	PHOSPHORUS (TOTAL SOLUBLE)	0.003
NITROGEN (TOTAL AS N) *	0.51	NITROGEN (DISS AS N) L	0.46
NITROGEN (DISS NO3+NO2 AS N) F	0.13	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	6.3	PHOSPHORUS (PARTICULATE)	0.010
CARBON (PART ORG AS C) L	0.40	NITROGEN (PART AS N) L	0.05
NITROGEN (DISS AS N) F	0.48		
*** BIOLOGICAL DATA			
TOTAL COLIFORM (NO./100 ML)	NV	FECAL COLIFORM (NO./100 ML)	NV
CHLOROPHYLL A	0.006		
*** ORGANIC DATA ***			
PHENOLIC MATERIAL (UG/L)	L0.001		
*** BALANCE DATA AND CALCULATED PARAMETERS ***			
SPEC CONDUCTANCE (US/CM)	1414.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	532.	HARDNESS (TOTAL AS CACO3) *	324.1
STAB INDEX-RYZNAR-PH UNITS *	4.0	CALCIUM (DISS.)	45.7
MAGNESIUM (DISS.)	51.0	SODIUM (DISS.)	200.
POTASSIUM (DISS.)	7.9	CHLORIDE (DISS.)	5.9
FLUORIDE (DISS.)	0.17	SULPHATE (DISS.)	276.
SILICA REACTIVE	10.	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	648.5
TOTAL DISSOLVED SOLIDS *	916.4	SAT INDX-LANGELIER-PH UNITS *	2.0
FREE CO2 *	10.2	PERCENT SODIUM *	56.6
NON CARBONATE HARDNESS *	0.0		

SAMPLE 038104051

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED NOV 16, 1991 1230 HOURS MST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
\# - UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN UG/L EXCEPT OTHERWISE NOTED

*** METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0013	BARIUM	(TOTAL)	0.05
IRON	(DISS)	2.0	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	0.002
CYANIDE	(TOTAL)	0.002	IRON	(DISS.)	0.04
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.08
MERCURY (UG/L)	(TOTAL)	0.02	NICKEL	(TOTAL)	L0.002
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	0.014			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.003
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

WATER QUALITY BRANCH
WESTERN REGION
ENVIRONMENT CANADA

SAMPLE 038104200

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED DEC 02, 1991 1220 HOURS CST
SUBMITTER ID 0003

RESULT CODES
NV - NO VALUE
* - CALCULATED VALUE
SD - SAMPLE DESTROYED
L - LAB FILTERED
IN - INTERFERENCE
IS - INSUFFICIENT SAMPLE
$ - UNUSUAL VALUE
F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** SITE RESULTS ***

DISSOLVED OXYGEN	8.7		

*** FIELD LAB RESULT ***

SPEC CONDUCTANCE (US/CM)	1620.	TEMPERATURE (DEG C)	0.0
PH (PH UNITS)	7.7	TURBIDITY (J T U)	NV

*** PHYSICAL DATA ***

TURBIDITY (J T U)	3.7	TEMPERATURE (DEG C)	21.3
COLOUR (REL UNITS)	30.0	PH (PH UNITS)	7.6
RESIDUE N.F. (105 C)	2.		

*** NUTRIENTS ***

PHOSPHORUS (TOTAL AS P)	0.019	PHOSPHORUS (TOTAL SOLUBLE)	L0.003
NITROGEN (TOTAL AS N) *	0.94	NITROGEN (DISS AS N) L	0.90
NITROGEN (DISS NO3+NO2 AS N) F	0.17	NITROGEN (TOT AMMONIA AS N)	L0.1
CARBON (DISS ORG AS C) L	6.8	PHOSPHORUS (PARTICULATE)	0.019
CARBON (PART ORG AS C) L	0.31	NITROGEN (PART AS N) L	0.04
NITROGEN (DISS AS N) F	0.84		

*** BIOLOGICAL DATA

TOTAL COLIFORM (NO./100 ML)	2.	FECAL COLIFORM (NO./100 ML)	L2.
CHLOROPHYLL A	0.005		

*** ORGANIC DATA ***

PHENOLIC MATERIAL (UG/L)	L0.001		

*** BALANCE DATA AND CALCULATED PARAMETERS ***

SPEC CONDUCTANCE (US/CM)	1540.	ALKALINITY (PHENOL AS CACO3)	0.0
ALKALINITY (TOTAL AS CACO3)	599.	HARDNESS (TOTAL AS CACO3) *	454.6
STAB INDEX-RYZNAR-PH UNITS *	2.4	CALCIUM (DISS.)	76.5
MAGNESIUM (DISS.)	44.	SODIUM (DISS.)	220.
POTASSIUM (DISS.)	8.3	CHLORIDE (DISS.)	6.4
FLUORIDE (DISS.)	0.28	SULPHATE (DISS.)	316.
SILICA REACTIVE	16.	HYDROXIDE *	0.0
CARBONATE *	0.0	BICARBONATE *	729.0
TOTAL DISSOLVED SOLIDS *	1067.0	SAT INDEX-LANGELIER-PH UNITS *	2.6
FREE CO2 *	29.0	PERCENT SODIUM *	50.7
NON CARBONATE HARDNESS *	0.0		

SAMPLE 038104200

STATION 00SA11AE0008 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DATE SAMPLED DEC 02, 1981 1220 HOURS CST
SUBMITTER ID 0003

RESULT CODES

NV - NO VALUE	IN - INTERFERENCE
* CALCULATED VALUE	IS - INSUFFICIENT SAMPLE
SD - SAMPLE DESTROYED	$ - UNUSUAL VALUE
L - LAB FILTERED	F - FIELD FILTERED

ALL VALUES IN MG/L EXCEPT OTHERWISE NOTED

*** HEAVY METALS, TRACE ELEMENTS, AND TOXIC MATERIALS ***

ARSENIC	(DISS.)	0.0010	BARIUM	(TOTAL)	0.05
BORON	(DISS)	2.0	CADMIUM	(TOTAL)	L0.001
COBALT	(TOTAL)	L0.002	COPPER	(TOTAL)	L0.001
CYANIDE	(TOTAL)	0.004	IRON	(DISS.)	0.06
LEAD	(TOTAL)	L0.004	MANGANESE	(DISS.)	0.14
MERCURY (UG/L)	(TOTAL)	L0.02	NICKEL	(TOTAL)	0.002
SELENIUM	(DISS.)	L.0005	VANADIUM	(TOTAL)	L0.001
ZINC	(TOTAL)	L0.001			

*** SYNTHETIC ORGANIC COMPOUNDS *** (RESULTS IN UG/L)

2,4,5-T	L0.002	2,4-D	L0.004
2,4-DB	L0.009	2,4-DP	L0.004
ALDRIN	L0.001	AROCLOR 1242	L0.002
AROCLOR 1254	L0.002	AROCLOR 1260	L0.005
AROCLOR TOTAL	L0.002	ALPHA-BHC	0.001
ALPHA-CHLORDANE	L0.003	GAMMA-CHLORDANE	L0.002
P,P'-DDD	L0.002	P,P'-DDE	L0.001
P,P'-DDT	L0.004	O,P'-DDT	L0.001
DIELDRIN	L0.002	ALPHA-ENDOSULFAN	L0.001
BETA -ENDOSULFAN	L0.003	ENDRIN	L0.002
HEPTACHLOR	L0.001	HEPTACHLOR EPOXIDE	L0.002
LINDANE	L0.001	MCPA	L0.2
METHOXYCHLOR	L0.01	PICLORAM	L0.2
SILVEX	L0.004	MIREX	L0.001
HCB	L0.001		

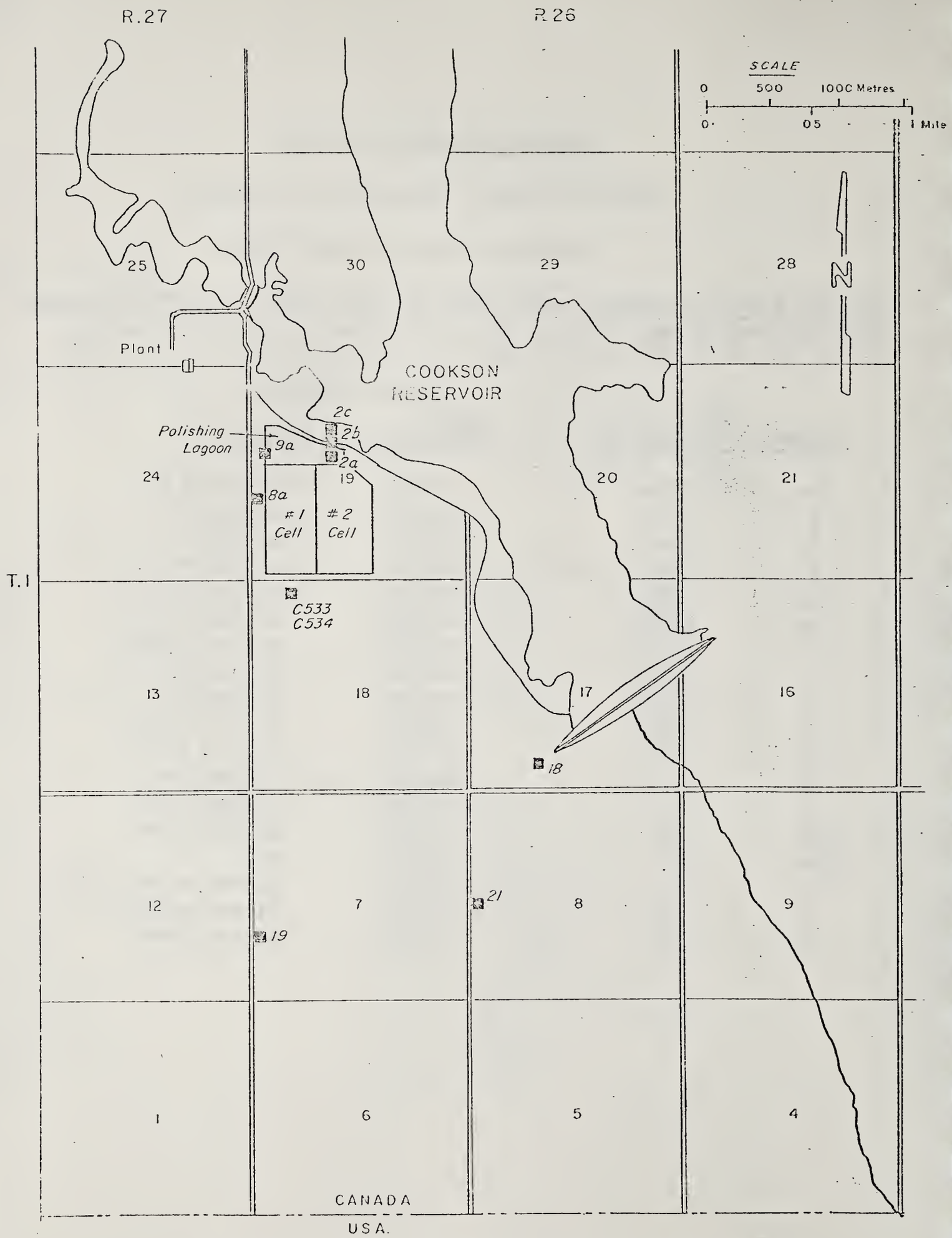
GROUNDWATER QUALITY MONITORING

Responsible Agency: Saskatchewan Environment

Sampling Frequency: Annual (Fall)

Parameters to be monitored: water level, pH, cond., major ions, TDS(calulated), Total alk/acidity, NO_3, color, B, Ba, F, Fe, Cu, Mn, Zn, Cd, Cr, Al, Pb, Hg, Mo, Sr, Co, Se, V, Silica, As, U, Li.

Station	SPC Piezometer No.	Station Description: Sampling Elevation (m)	Station Description: Material
8a	C726A	746.338	unoxidized till
|	C726B	751.040	mottled till
|	C726C	752.739	oxidized till
|	C726D	755.543	oxidized till
8a	C726E	738.725	empress gravel
9a	C728A	753.405	oxidized till
|	C728B	743.265	unoxidized till
|	C728C	747.645	mottled till
|	C728D	752.305	oxidized till
9a	C728E	739.912	empress gravel
2a	C712B	746.112	oxidized till
2b	C718	748.385	mottled till
2c	C719	747.715	oxidized till
C533	C533	740.441	empress gravel
C534	C534	753.499	till
18	C741	735.153	empress gravel
19	C735	753.789	empress gravel
21	C742	741.800	empress gravel



GROUNDWATER QUALITY MONITORING

Ground Water Quality

Annual Sampling

LOCATION 8a C726A

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	755.42	755.10	754.01	750.22
TDS (sum of ions)	mg/L	656	849	530	700
pH	us/cm	8.06	7.74	8.36	7.67
conductivity	us/cm	966	1290	1070	1200
HCO_3	mg/L	412	598	349	508
CO_3	mg/L				
Cl	mg/L	23	21	22	21
SO_4	mg/L	180	156	154	154
Ca	mg/L	52	117	26	68
Mg	mg/L	46	56	48	51
K	mg/L	10.0	8.4	8.8	8.0
Na	mg/L	82.0	92	85	84
Fe	mg/L	23.0	0.57	0.79	24.8
Mn	mg/L	0.07	1.7	1.81	2.5
Total Alkalinity/Acidity	mg/L	338	490	291	417
NO_3 -N	mg/L	0.004	0.005	0.015	0.032
Apparent Colour	mg/L		5	5	5
Ba	mg/L		0.1	L0.1	L0.1
F	mg/L		0.35	0.13	0.2
Cu	mg/L	0.28	0.25	0.36	0.063
Zn	mg/L	0.22	0.028	0.011	0.015
Cd	mg/L	L0.001	L0.001	L0.001	0.005
Cr	mg/L	0.07	0.01	0.01	0.03
Al	mg/L	23.0	1.02	1.96	14.80
Pb	mg/L	0.012	L0.004	0.028	0.04
Hg	mg/L	L 0.0001	L0.0001	L0.0001	0.0002
Mo	mg/L		L0.05	0.09	L0.05
Sr	mg/L		0.65	0.85	0.94
Co	mg/L		0.004	0.005	0.012
Se	mg/L	0.0019	0.0003	L0.0002	L0.0002
V	mg/L		L0.004	L0.004	0.016
Silica	mg/L	16.5	18.8	17.5	19.5
As	mg/L		0.002	0.0022	0.009
U	mg/L		0.0001	0.0077	0.020
Li	mg/L		0.105	0.105	0.147
B	mg/L	0.7	0.5	0.55	0.55

Ground Water Quality

Annual Sampling

LOCATION 8a C726B

DATE			1980 SEPT.	1981 APR.	1981 JULY	1981 NOV
AGENCY			SPC	SPC	SPC	SPC
PARAMETERS						
Water Level	m			755.18	755.19	754.72
TDS (sum of ions)	mg/L			65000	68500	85000
pH	us/cm			7.44	7.98	7.48
conductivity	us/cm			10010	49021	48300
HCO_3	mg/L			1550	1605	973
CO_3	mg/L					
Cl	mg/L			240	222	200
SO_4	mg/L			76000	50200	59000
Ca	mg/L			590	437	418
Mg	mg/L			14200	10950	12700
K	mg/L			335	300	314
Na	mg/L			7800	5500	6500
Fe	mg/L			0.11	0.15	1.8
Mn	mg/L			1.41	1.78	3.4
Total Alkalinity/Acidity	mg/L	D		1270	1316	7970
NO_3-N	mg/L			0.004	0.025	0.037
Apparent Colour	mg/L	R		500	500	600
Ba	mg/L			L0.1	0.1	1.4
F	mg/L	Y		0.43	0.25	0.32
Cu	mg/L			0.45	0.49	0.07
Zn	mg/L			0.08	0.04	0.03
Cd	mg/L			L0.001	L0.001	0.012
Cr	mg/L			L0.01	0.09	0.12
Al	mg/L			0.03	1.4	1.57
Pb	mg/L			0.022	0.027	0.049
Hg	mg/L			L0.0001	L0.0001	0.0002
Mo	mg/L			L0.05	0.05	0.34
Sr	mg/L			15.0	23.0	16.8
Co	mg/L			0.066	0.071	0.064
Se	mg/L			0.002	L0.0002	L0.0002
V	mg/L			0.004	L0.004	0.008
Silica	mg/L			7.3	6.3	8.5
As	mg/L			L0.0002	0.016	0.0029
U	mg/L			L0.0001	0.0003	0.400
Li	mg/L			8.3	8.3	9.14
B	mg/L			1.25	1.4	1.43

Ground Water Quality

Annual Sampling

LOCATION 8a C726C

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	754.64	754.92	755.05	755.17
TDS (sum of ions)	mg/L	905	989	540	1200
pH	us/cm	7.85	7.86	8.51	7.91
conductivity	us/cm	1340	1370	1080	1700
HCO_3	mg/L	683	617	352	605
CO_3	mg/L				
Cl	mg/L	3.5	4.0	3.9	4.5
SO_4	mg/L	215	310	189	500
Ca	mg/L	130	73	23	81
Mg	mg/L	74.0	94	81	122
K	mg/L	20.0	29.5	22.0	30
Na	mg/L	35.0	88	35	161
Fe	mg/L	1.3	0.51	0.15	0.64
Mn	mg/L	0.22	0.11	0.11	0.1
Total Alkalinity/Acidity	mg/L	560	506	305	496
NO_3 -N	mg/L	L0.003	0.004	0.028	0.018
Apparent Colour	mg/L		5	5	L5
Ba	mg/L		L0.1	0.1	L0.1
F	mg/L		0.45	0.17	0.29
Cu	mg/L	0.18	0.31	0.35	0.14
Zn	mg/L	0.13	0.024	0.068	0.069
Cd	mg/L	L 0.001	L0.001	L0.001	0.006
Cr	mg/L	L0.01	0.01	L0.01	0.01
Al	mg/L	1.05	0.84	0.24	0.56
Pb	mg/L	0.025	0.007	0.023	0.046
Hg	mg/L	L 0.0001	L0.0001	L0.0001	0.0002
Mo	mg/L		L0.05	0.05	L0.05
Sr	mg/L		0.1	0.66	0.84
Co	mg/L		0.002	L0.001	L0.001
Se	mg/L	0.0003	0.0003	L0.0002	L0.0002
V	mg/L		L0.004	L0.004	L0.004
Silica	mg/L	20.4	21.7	22.5	21.7
As	mg/L		0.0009	0.0014	0.0006
U	mg/L		0.0001	0.0082	0.092
Li	mg/L		0.21	0.188	0.24
B	mg/L	0.33	0.36	0.38	0.4

Ground Water Quality

Annual Sampling

LOCATION 8a C726D

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m				
TDS (sum of ions)	mg/L				
pH	us/cm				
conductivity	us/cm				
HCO_3					
CO_3	mg/L				
Cl	mg/L				
SO_4	mg/L				
Ca	mg/L				
Mg	mg/L				
K	mg/L				
Na	mg/L				
Fe	mg/L				
Mn	mg/L	D	D	D	D
Total Alkalinity/Acidity	mg/L	R	R	R	R
NO_3-N	mg/L	Y	Y	Y	Y
Apparent Colour	mg/L				
Ba	mg/L				
F	mg/L				
Cu	mg/L				
Zn	mg/L				
Cd	mg/L				
Cr	mg/L				
Al	mg/L				
Pb	mg/L				
Hg	mg/L				
Mo	mg/L				
Sr	mg/L				
Co	mg/L				
Se	mg/L				
V	mg/L				
Silica	mg/L				
As	mg/L				
U	mg/L				
Li	mg/L				
B	mg/L				

Ground Water Quality

Annual Sampling

LOCATION 8a C726E

DATE		1980 SEPT	1981 MAR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	751.64	751.72	751.63	751.35
TDS (sum of ions)	mg/L			500	725
pH	us/cm			8.33	7.68
conductivity	us/cm			1060	1170
HCO_3	mg/L			349	562
CO_3	mg/L				
Cl	mg/L			4.5	4.5
SO_4	mg/L			172	180
Ca	mg/L			29	88
Mg	mg/L			62	66
K	mg/L			7.7	6.8
Na	mg/L			47	58
Fe	mg/L			0.67	0.77
Mn	mg/L			0.24	0.17
Total Alkalinity/Acidity	mg/L			288	461
NO_3 -N	mg/L			0.016	0.026
Apparent Colour	mg/L			5	L5
Ba	mg/L			L0.1	1.1
F	mg/L			0.18	0.30
Cu	mg/L			0.25	0.04
Zn	mg/L			0.027	0.014
Cd	mg/L			L0.001	0.002
Cr	mg/L			L0.01	L0.01
Al	mg/L			0.79	0.25
Pb	mg/L			0.039	0.055
Hg	mg/L			0.0002	0.0002
Mo	mg/L			L0.05	L0.05
Sr	mg/L			1.25	1.23
Co	mg/L			0.004	L0.001
Se	mg/L			0.0004	L0.0002
V	mg/L			L0.004	L0.004
Silica	mg/L			17.5	18.7
As	mg/L			0.0029	0.0011
U	mg/L			0.0004	0.005
Li	mg/L			0.069	0.077
B	mg/L			0.78	0.77

Ground Water Quality

Annual Sampling

LOCATION 9a C728A

DATE		1980 OCT.	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m				
TDS (Sum of ions)	mg/L				
pH	us/cm				
conductivity	us/cm				
[illegible]	mg/L				
CO_3	mg/L				
Cl	mg/L				
SO_4	mg/L				
Ca	mg/L				
Mg	mg/L				
K	mg/L				
Na	mg/L				
Fe	mg/L				
Mn	mg/L				
Total Alkalinity/Acidity	mg/L	D	D	D	D
NO_3-N	mg/L				
Apparent Colour	mg/L	R	R	R	R
Ba	mg/L				
F	mg/L	Y	Y	Y	Y
Cu	mg/L				
Zn	mg/L				
Cd	mg/L				
Cr	mg/L				
Al	mg/L				
Pb	mg/L				
Hg	mg/L				
Mo	mg/L				
Sr	mg/L				
Co	mg/L				
Se	mg/L				
V	mg/L				
Silica	mg/L				
As	mg/L				
U	mg/L				
Li	mg/L				
B	mg/L				

Ground Water Quality

Annual Sampling

LOCATION 9a C7288

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	750.67	750.38	750.35	750.19
TDS (sum of ions)	mg/L	1387	1360	1010	1150
pH	us/cm	7.63	7.84	7.92	7.65
conductivity	us/cm	2000	1850	1750	1820
HCO_3	mg/L	722	632	414	565
CO_3	mg/L				
Cl	mg/L	22	21	22	22
SO_4	mg/L	500	494	447	469
Ca	mg/L	182	160	74	121
Mg	mg/L	71.0	85	73	78
K	mg/L	9.2	9.9	9.6	9.3
Na	mg/L	151	170	143	151
Fe	mg/L	1.25	0.66	1.35	0.72
Mn	mg/L	1.32	0.76	0.67	0.67
Total Alkalinity/Acidity	mg/L	592	518	340	463
NO_3 -N	mg/L	0.006	0.005	0.015	0.010
Apparent Colour	mg/L		5	10	L5
Ba	mg/L		0.1	L0.1	0.8
F	mg/L		0.35	0.13	0.19
Cu	mg/L	0.17	0.31	0.27	0.093
Zn	mg/L	0.12	0.025	0.025	0.03
Cd	mg/L	L0.001	L0.001	L0.001	0.001
Cr	mg/L	0.01	0.02	L0.01	L0.01
Al	mg/L	0.71	1.27	1.54	0.38
Pb	mg/L	0.28	0.004	0.033	0.057
Hg	mg/L	L0.0001	L0.0001	L0.0001	0.0002
Mo	mg/L		L0.05	L0.05	0.06
Sr	mg/L		1.30	1.6	1.55
Co	mg/L		0.003	0.007	0.003
Se	mg/L	0.0008	L0.0002	0.0003	L0.0002
V	mg/L		L0.004	0.007	L0.004
Silica	mg/L	15.5	15.7	15.5	16.5
As	mg/L		0.0037	0.0056	0.0005
U	mg/L		L0.0001	0.0055	0.0018
Li	mg/L		0.12	0.113	0.126
B	mg/L	1.3	1.23	1.28	1.30

Ground Water Quality

Annual Sampling

LOCATION 9a C728C

DATE		1980 OCT.	1981 MAR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m				748.51
TDS (sum of ions)	mg/L				2100
pH	us/cm				7.54
conductivity	us/cm				2800
HCO_3	mg/L				609
CO_3	mg/L				
Cl	mg/L				67
SO_4	mg/L				1070
Ca	mg/L				284
Mg	mg/L				120
K	mg/L				10.8
Na	mg/L				225
Fe	mg/L				1.6
Mn	mg/L				1.4
Total Alkalinity/Acidity	mg/L	D	D	D	500
NO_3-N	mg/L				0.68
Apparent Colour	mg/L	R	R	R	L5
Ba	mg/L				0.2
F	mg/L	Y	Y	Y	0.15
Cu	mg/L				0.048
Zn	mg/L				0.013
Cd	mg/L				0.002
Cr	mg/L				0.03
Al	mg/L				0.53
Pb	mg/L				0.43
Hg	mg/L				0.0002
Mo	mg/L				0.12
Sr	mg/L				1.79
Co	mg/L				0.005
Se	mg/L				L0.0002
V	mg/L				0.004
Silica	mg/L				17.7
As	mg/L				0.001
U	mg/L				0.0013
Li	mg/L				0.22
B	mg/L				0.8

Ground Water Quality

Annual Sampling

LOCATION 9a C728D

DATE		1980 OCT.	1981 MAR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m				
TDS (sum of ions)	mg/L				
pH	us/cm				
conductivity	us/cm				
HCO_3	mg/L				
CO_3	mg/L				
Cl	mg/L				
SO_4	mg/L				
Ca	mg/L				
Mg	mg/L				
K	mg/L				
Na	mg/L				
Fe	mg/L	D	D	D	D
Mn	mg/L				
Total Alkalinity/Acidity	mg/L	R	R	R	R
NO_3-N	mg/L				
Apparent Colour	mg/L	Y	Y	Y	Y
Ba	mg/L				
F	mg/L				
Cu	mg/L				
Zn	mg/L				
Cd	mg/L				
Cr	mg/L				
Al	mg/L				
Pb	mg/L				
Hg	mg/L				
Mo	mg/L				
Sr	mg/L				
Co	mg/L				
Se	mg/L				
V	mg/L				
Silica	mg/L				
As	mg/L				
U	mg/L				
Li	mg/L				
B	mg/L				

Ground Water Quality

Annual Sampling

LOCATION 9a C728E

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	751.69	751.94	751.68	751.23
TDS (sum of ions)	mg/L	920	957	570	800
pH	us/cm	7.56	7.83	8.16	7.67
conductivity	us/cm	1380	1350	1220	1300
HCO_3	mg/L	746	746	461	620
CO_3	mg/L				
Cl	mg/L	7.0	9.4	9.1	8.9
SO_4	mg/L	165	187	140	192
Ca	mg/L	128	120	36	90
Mg	mg/L	65.0	68	62	64
K	mg/L	8.0	8.2	9.1	7.9
Na	mg/L	79	96	73	84
Fe	mg/L	4.3	9.9	2.26	1.40
Mn	mg/L	0.63	0.75	0.57	0.52
Total Alkalinity/Acidity	mg/L	612	612	378	508
NO_3-N	mg/L	L0.003	0.003	0.017	0.023
Apparent Colour	mg/L		5	5	L5
Ba	mg/L		0.1	0.2	0.7
F	mg/L		0.46	0.17	0.27
Cu	mg/L	0.29	0.220	0.34	0.033
Zn	mg/L	0.083	L0.001	0.02	0.017
Cd	mg/L	L0.001	L0.001	L0.001	0.003
Cr	mg/L	L0.01	0.01	0.03	0.02
Al	mg/L	0.77	0.93	0.11	0.76
Pb	mg/L	L0.004	0.006	0.012	0.062
Hg	mg/L	L0.0001	L0.0001	L0.0001	0.0002
Mo	mg/L		0.02	L0.05	L0.05
Sr	mg/L		1.10	1.31	1.38
Co	mg/L		L0.001	0.002	L0.001
Se	mg/L	0.0004	L0.0002	0.0003	L0.0002
V	mg/L		L0.004	L0.004	L0.004
Silica	mg/L	15.5	17.4	16.4	17.7
As	mg/L		0.095	0.003	0.0006
U	mg/L		0.0005	0.0002	0.0034
Li	mg/L		0.081	0.075	0.096
B	mg/L	1.15	1.08	1.10	1.17

Ground Water Quality

Annual Sampling

LOCATION 2a C712B

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	752.16	752.57	752.39	752.53
TDS (sum of ions)	mg/L	1102	1270	1480	2800
pH	us/cm	8.0	8.0	8.11	7.9
conductivity	us/cm	1830	1710	2100	3192
HCO_3	mg/L	312	416	312	377
CO_3	mg/L				
Cl	mg/L	18.0	18	25	47
SO_4	mg/L	590	654	835	1710
Ca	mg/L	103	178	217	470
Mg	mg/L	99	80	102	160
K	mg/L	8.8	10.1	11.0	12.0
Na	mg/L	84.0	129	95	124
Fe	mg/L	2.9	2.49	1.71	4.4
Mn	mg/L	0.19	0.80	0.23	0.26
Total Alkalinity/Acidity	mg/L	256	341	256	309
NO_3-N	mg/L	2.8	1.56	2.5	6.7
Apparent Colour	mg/L		35	20	45
Ba	mg/L		L0.1	L0.1	0.8
F	mg/L		0.38	0.26	0.30
Cu	mg/L	0.2	0.27	0.76	0.029
Zn	mg/L	0.0063	0.05	0.025	0.003
Cd	mg/L	L0.001	L0.001	L0.001	0.004
Cr	mg/L	0.02	0.02	0.20	0.02
Al	mg/L	1.82	1.5	3.0	2.26
Pb	mg/L	0.01	0.004	0.033	0.012
Hg	mg/L	L0.0001	0.0002	0.0001	0.0002
Mo	mg/L		0.01	0.12	L0.05
Sr	mg/L		0.65	1.0	1.91
Co	mg/L		0.001	0.005	0.003
Se	mg/L	0.0021	0.0025	0.0062	0.0013
V	mg/L		0.006	0.011	0.013
Silica	mg/L	18.0	19.4	20.0	20.5
As	mg/L		0.0023	0.0096	0.0024
U	mg/L		0.0007	0.0716	0.070
Li	mg/L		0.102	0.094	0.150
B	mg/L	0.43	0.56	0.58	0.5

Ground Water Quality

Annual Sampling

LOCATION 2b C718

DATE			1980 OCT	1981 APR.	1981 JULY	1981 NOV
AGENCY			SPC	SPC	SPC	SPC
PARAMETERS						
Water Level	m			752.49	752.36	751.43
TDS (sum of ions)	mg/L				570	775
pH	us/cm				8.07	7.85
conductivity	us/cm				1130	1210
HCO_3	mg/L				418	566
CO_3	mg/L					
Cl	mg/L				12	13
SO_4	mg/L				142	171
Ca	mg/L				46	96
Mg	mg/L				54	60
K	mg/L				7.4	6.8
Na	mg/L				65	73
Fe	mg/L				0.65	1.2
Mn	mg/L	D			0.6	0.56
Total Alkalinity/Acidity	mg/L	R			343	464
NO_3-N	mg/L	Y			0.91	1.02
Apparent Colour	mg/L				10	15
Ba	mg/L				L0.1	0.8
F	mg/L				0.14	0.2
Cu	mg/L				0.25	0.028
Zn	mg/L				0.034	0.008
Cd	mg/L				0.003	0.005
Cr	mg/L				L0.01	0.01
Al	mg/L				0.92	1.63
Pb	mg/L				0.038	0.033
Hg	mg/L				L0.0001	0.0002
Mo	mg/L				0.03	L0.05
Sr	mg/L				0.56	0.70
Co	mg/L				0.003	0.001
Se	mg/L				0.0007	L0.0002
V	mg/L				L0.004	0.004
Silica	mg/L				19.0	19.5
As	mg/L				0.0008	0.0007
U	mg/L				0.028	0.068
Li	mg/L				0.101	0.166
B	mg/L				0.44	0.50

Ground Water Quality

Annual Sampling

LOCATION 2c C719

DATE		1980 OCT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	752.02	752.67	751.84	751.69
TDS (sum of ions)	mg/L			3350	3900
pH	us/cm			7.63	7.61
conductivity	us/cm			4398	4520
HCO_3	mg/L			430	606
CO_3	mg/L				
Cl	mg/L			107	110
SO_4	mg/L			2000	2250
Ca	mg/L			387	494
Mg	mg/L			241	241
K	mg/L			10.0	11.9
Na	mg/L			350	410
Fe	mg/L			1.23	0.51
Mn	mg/L			0.02	0.03
Total Alkalinity/Acidity	mg/L			353	497
NO_3-N	mg/L			16.8	18.0
Apparent Colour	mg/L			10	15
Ba	mg/L			0.2	0.1
F	mg/L			0.14	0.22
Cu	mg/L			0.29	0.01
Zn	mg/L			0.035	0.016
Cd	mg/L			L0.001	0.003
Cr	mg/L			0.02	0.04
Al	mg/L			1.38	0.89
Pb	mg/L			0.044	0.015
Hg	mg/L			L0.0001	0.0002
Mo	mg/L			L0.05	0.15
Sr	mg/L			2.47	1.65
Co	mg/L			L0.001	L0.001
Se	mg/L			0.163	0.0015
V	mg/L			L0.004	L0.004
Silica	mg/L			21.4	22.0
As	mg/L			0.0033	0.0007
U	mg/L			0.167	0.220
Li	mg/L			0.28	0.154
B	mg/L			0.93	1.5

Ground Water Quality

Annual Sampling

LOCATION C533

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	751.31	751.43	751.28	750.89
TDS (sum of ions)	mg/L	1065	1090	791	950
pH	us/cm	7.88	8.1	8.22	7.8
conductivity	us/cm	1580	1510	1470	1490
HCO_3	mg/L	776	778	488	688
CO_3	mg/L				
Cl	mg/L	5.0	4.4	4.3	4.1
SO_4	mg/L	257	272	247	249
Ca	mg/L	109	109	31	89
Mg	mg/L	64	78	66	71
K	mg/L	9.5	9.1	9.4	9.2
Na	mg/L	137	147	126	152
Fe	mg/L	0.90	0.69	0.68	3.1
Mn	mg/L	0.27	0.3	0.27	0.26
Total Alkalinity/Acidity	mg/L	636	638	400	564
NO_3 -N	mg/L	0.016	0.013	0.019	0.024
Apparent Colour	mg/L		5	5	L5
Ba	mg/L		0.1	0.1	0.7
F	mg/L		0.37	0.09	0.23
Cu	mg/L	0.042	0.11	0.17	0.013
Zn	mg/L	9.5	10.4	9.3	9.1
Cd	mg/L	L0.001	L0.001	0.001	0.003
Cr	mg/L	0.02	0.01	L0.01	0.04
Al	mg/L	0.36	0.42	0.80	0.66
Pb	mg/L	0.018	0.009	0.026	0.061
Hg	mg/L	L0.0001	L0.0001	L0.0001	0.0001
Mo	mg/L		0.02	L0.05	L0.05
Sr	mg/L		1.2	1.5	1.55
Co	mg/L		0.002	0.006	L0.001
Se	mg/L	L0.0002	L0.0002	0.0002	L0.0002
V	mg/L		L0.004	L0.004	L0.004
Silica	mg/L	14.3	14.7	14.3	15.3
As	mg/L		0.0015	0.0027	0.0042
U	mg/L		0.0001	L0.0001	0.0508
Li	mg/L		0.121	0.101	0.123
B	mg/L	2.13	2.03	1.98	2.15

Ground Water Quality

Annual Sampling

LOCATION C534

DATE		1980 SEPT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	758.08	757.62	757.62	757.45
TDS (sum of ions)	mg/L	4250	4250	3700	3500
pH	us/cm	7.58	7.70	7.71	7.68
conductivity	us/cm	5400	5160	4839	5060
HCO_3	mg/L	622	656	230	588
CO_3	mg/L				
Cl	mg/L	300	298	298	5
SO_4	mg/L	2400	2320	2140	2250
Ca	mg/L	511	539	455	543
Mg	mg/L	286	339	300	312
K	mg/L	13.5	17.0	11.0	9.2
Na	mg/L	340	337	327	17
Fe	mg/L	0.51	0.25	0.32	0.21
Mn	mg/L	0.18	0.12	0.18	0.21
Total Alkalinity/Acidity	mg/L	510	538	189	482
NO_3 -N	mg/L	38	32	32	41
Apparent Colour	mg/L		10	10	L5
Ba	mg/L		L0.1	0.1	L0.1
F	mg/L		0.32	0.11	0.21
Cu	mg/L	0.068	0.18	0.14	0.012
Zn	mg/L	9.2	18.7	19.6	35.00
Cd	mg/L	L0.001	L0.001	L0.001	L0.001
Cr	mg/L	0.01	L0.01	L0.01	L0.01
Al	mg/L	0.3	0.04	0.42	0.5
Pb	mg/L	0.012	L0.004	0.12	0.02
Hg	mg/L	0.0001	0.0001	0.0002	0.0002
Mo	mg/L		0.02	0.06	0.12
Sr	mg/L		1.8	3.1	2.16
Co	mg/L		L0.001	0.003	L0.001
Se	mg/L	0.35	0.024	0.0097	0.0014
V	mg/L		L0.004	L0.004	L0.004
Silica	mg/L	15.0	13.6	14.6	16.7
As	mg/L		L0.0002	0.0008	0.0006
U	mg/L		.0022	L0.0001	0.0772
Li	mg/L		0.43	0.41	0.47
B	mg/L	0.78	0.72	0.73	0.5

Ground Water Quality

Annual Sampling

LOCATION 18 C741

DATE		1980 OCT	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
.Water Level	m	746.46	746.49	747.24	746.48
TDS (sum of ions)	mg/L	1010	1090	850	975
pH	us/cm	8.05	7.86	8.19	7.69
conductivity	us/cm	1510	1540	1430	1560
HCO_3	mg/L	721	706	485	574
CO_3	mg/L				
Cl	mg/L	6.5	7.7	6.4	9.3
SO_4	mg/L	255	306	243	318
Ca	mg/L	91	111	35	76
Mg	mg/L	44	60	48	56
K	mg/L	8.2	8.3	8.7	8.5
Na	mg/L	166	171	163	166
Fe	mg/L	1.3	1.17	1.75	1.10
Mn	mg/L	0.18	0.25	0.11	0.16
Total Alkalinity/Acidity	mg/L	591	579	398	471
NO_3-N	mg/L	0.168	1.14	0.53	1.91
Apparent Colour	mg/L		5	5	L5
Ba	mg/L		0.1	0.1	0.2
F	mg/L		0.32	0.21	0.30
Cu	mg/L	0.19	0.19	0.24	0.036
Zn	mg/L	0.26	0.088	0.077	0.013
Cd	mg/L	0.001	L0.001	L0.001	0.006
Cr	mg/L	L0.01	0.01	0.06	L0.01
Al	mg/L	0.71	0.75	1.06	0.65
Pb	mg/L	L0.004	L0.004	0.008	0.11
Hg	mg/L	L0.0001	0.0001	L0.0001	0.0002
Mo	mg/L		0.02	0.03	0.11
Sr	mg/L		1.7	2.0	1.85
Co	mg/L		L0.001	0.004	L0.001
Se	mg/L	0.0003	0.001	0.0019	L0.0002
V	mg/L		L0.004	L0.004	0.004
Silica	mg/L	12.2	13.0	13.0	15.0
As	mg/L		0.0011	0.0027	0.0007
U	mg/L		0.0001	0.0003	0.004
Li	mg/L		0.112	0.105	0.118
B	mg/L	2.15	2.00	2.00	2.00

Ground Water Quality

Annual Sampling

LOCATION 19 C735

DATE		1980 OCT.	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m				
TDS (sum of ions)	mg/L				
pH	us/cm				
conductivity	us/cm				
HCO_3	mg/L				
CO_3	mg/L				
Cl	mg/L				
SO_4	mg/L				
Ca	mg/L				
Mg	mg/L				
K	mg/L				
Na	mg/L	D	D	D	D
Fe	mg/L	R	R	R	R
Mn	mg/L				
Total Alkalinity/Acidity	mg/L	Y	Y	Y	Y
NO_3-N	mg/L				
Apparent Colour	mg/L				
Ba	mg/L				
F	mg/L				
Cu	mg/L				
Zn	mg/L				
Cd	mg/L				
Cr	mg/L				
Al	mg/L				
Pb	mg/L				
Hg	mg/L				
Mo	mg/L				
Sr	mg/L				
Co	mg/L				
Se	mg/L				
V	mg/L				
Silica	mg/L				
As	mg/L				
U	mg/L				
Li	mg/L				
B	mg/L				

Ground Water Quality

Annual Sampling

LOCATION 21 C742

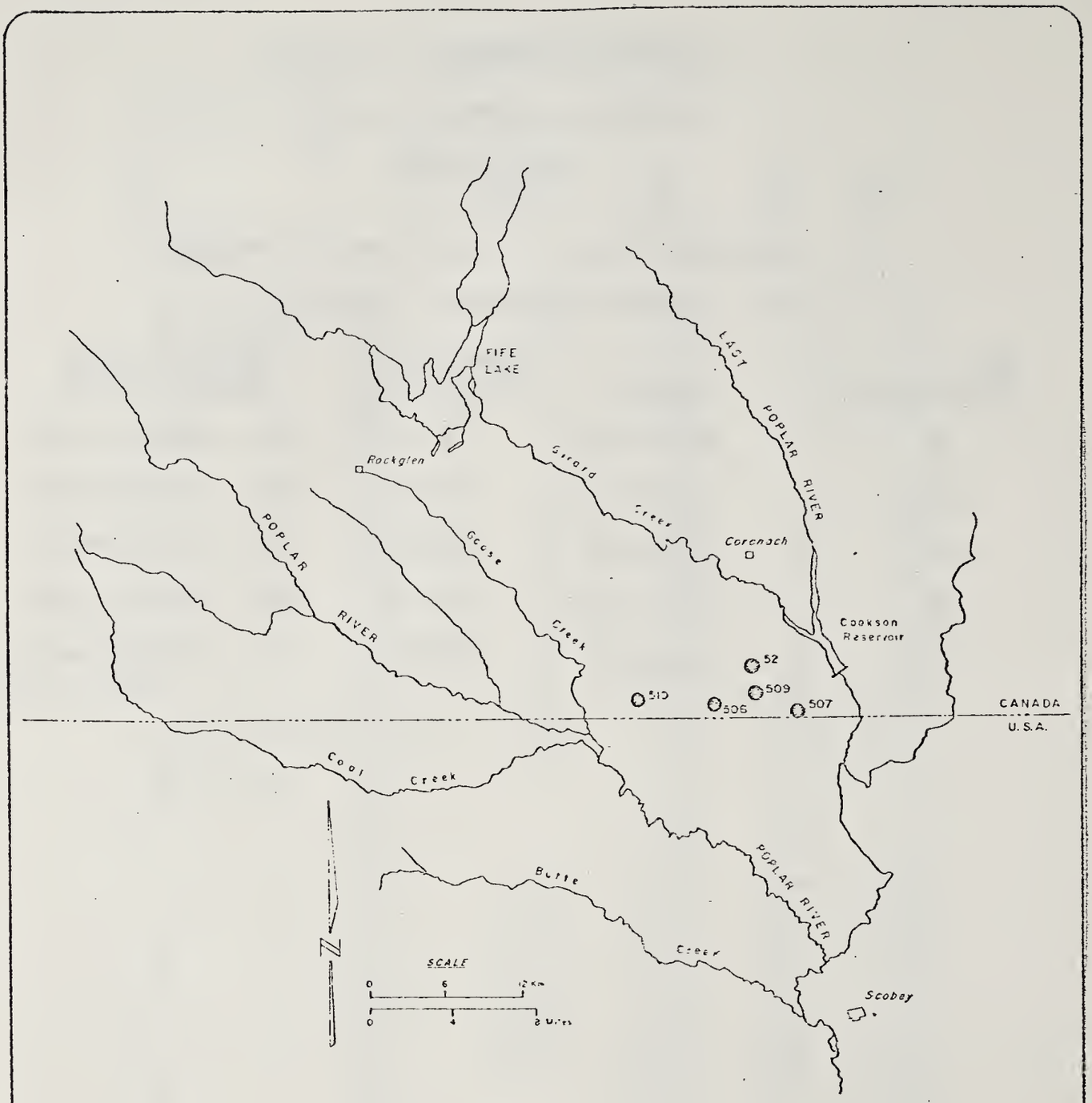
DATE		1980 OCT.	1981 APR.	1981 JULY	1981 NOV
AGENCY		SPC	SPC	SPC	SPC
PARAMETERS					
Water Level	m	747.05	746.95	746.90	746.75
TDS (sum of ions)	mg/L	960	975	775	925
pH	us/cm	7.86	7.89	7.94	7.72
conductivity	us/cm	1430	1370	1350	1340
HCO_3	mg/L	454	407	285	418
CO_3	mg/L				
Cl	mg/L	12	13	13	13
SO_4	mg/L	410	419	390	403
Ca	mg/L	114	131	85	130
Mg	mg/L	84	90	81	82
K	mg/L	6.9	7.4	8.7	7.7
Na	mg/L	51	51	44	55
Fe	mg/L	2.5	1.27	1.45	0.87
Mn	mg/L	0.16	0.17	0.17	0.08
Total Alkalinity/Acidity	mg/L	372	334	234	343
NO_3 -N	mg/L	0.65	0.3	0.21	0.072
Apparent Colour	mg/L		5	5	L5
Ba	mg/L		0.1	0.2	0.2
F	mg/L		0.35	0.12	0.22
Cu	mg/L	0.21	0.17	0.20	0.037
Zn	mg/L	0.15	0.12	0.02	0.036
Cd	mg/L	L0.001	L0.001	L0.001	0.003
Cr	mg/L	0.04	0.01	L0.01	0.03
Al	mg/L	0.66	0.43	0.46	0.36
Pb	mg/L	0.009	0.009	0.01	0.14
Hg	mg/L	L0.0001	L0.0001	L0.0001	0.0003
Mo	mg/L		L0.05	0.05	L0.05
Sr	mg/L		1.5	2.1	2.03
Co	mg/L		L0.001	L0.001	L0.001
Se	mg/L	0.0001	0.0002	L0.0002	L0.0002
V	mg/L		L0.004	L0.004	L0.004
Silica	mg/L	11.2	10.7	10.6	11.5
As	mg/L		0.0007	0.0008	0.0008
U	mg/L		0.0001	0.0003	0.0004
Li	mg/L		0.09	0.09	0.108
B	mg/L	0.93	0.82	0.83	0.87

GROUNDWATER PIEZOMETERS TO MONITOR POTENTIAL DRAWDOWN DUE TO COAL SEAM DEWATERING

Responsible Agency: Saskatchewan Environment

Measurement Frequency: Quarterly

SPC Piezometer No.	Location	Sampling Elevation (m)	Perforation Zone (depth in feet)
52	NW14-1-27W3	738.442	140 - 160 (in coal)
506	SW4-1-27W3	749.334	266 - 270 (in coal)
507	SW6-1-26W3	726.703	110 - 114 (in coal)
509	NW11-1-27W3	725.770	248 - 252 (in coal)
510	NW1-1-28W3	770.279	92 - 96 (in layered coal and clay)



GROUNDWATER PIEZOMETERS TO MONITOR POTENTIAL DRAWDOWN DUE TO COAL SEAM DEWATERING

Ground Water Piezometers To Monitor
Potential Drawndown Due to Coal
Season Dewatering-Water Elevation (m)

Piezometer	DOE Ref. No.	1981 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1982 Jan.	Feb.
52	52	753.84	753.78	753.82	753.89	753.87	753.89	753.71	753.72	753.68	753.68	753.61	753.63		
506	506	RQ 795.87	RQ 795.88	RQ 813.54	RQ 814.31	RQ 814.64	RQ 814.83	RQ 814.92	RQ 815.02	RQ 814.98	765.94'	765.91'	*'		
507	507	746.18	746.15	746.15	746.22	746.21	746.26	746.11	746.14	746.10	*	750.12	*		
509	509	752.99	753.09	753.23	753.35	753.33	753.44	753.36	753.46	753.51	754.55	754.49	*		
510	510	777.46	777.45	777.42	777.49	777.48	777.55	777.46	777.44	777.42	778.46	778.35	778.41		

* inaccessible

' 506A well- (506 damaged)

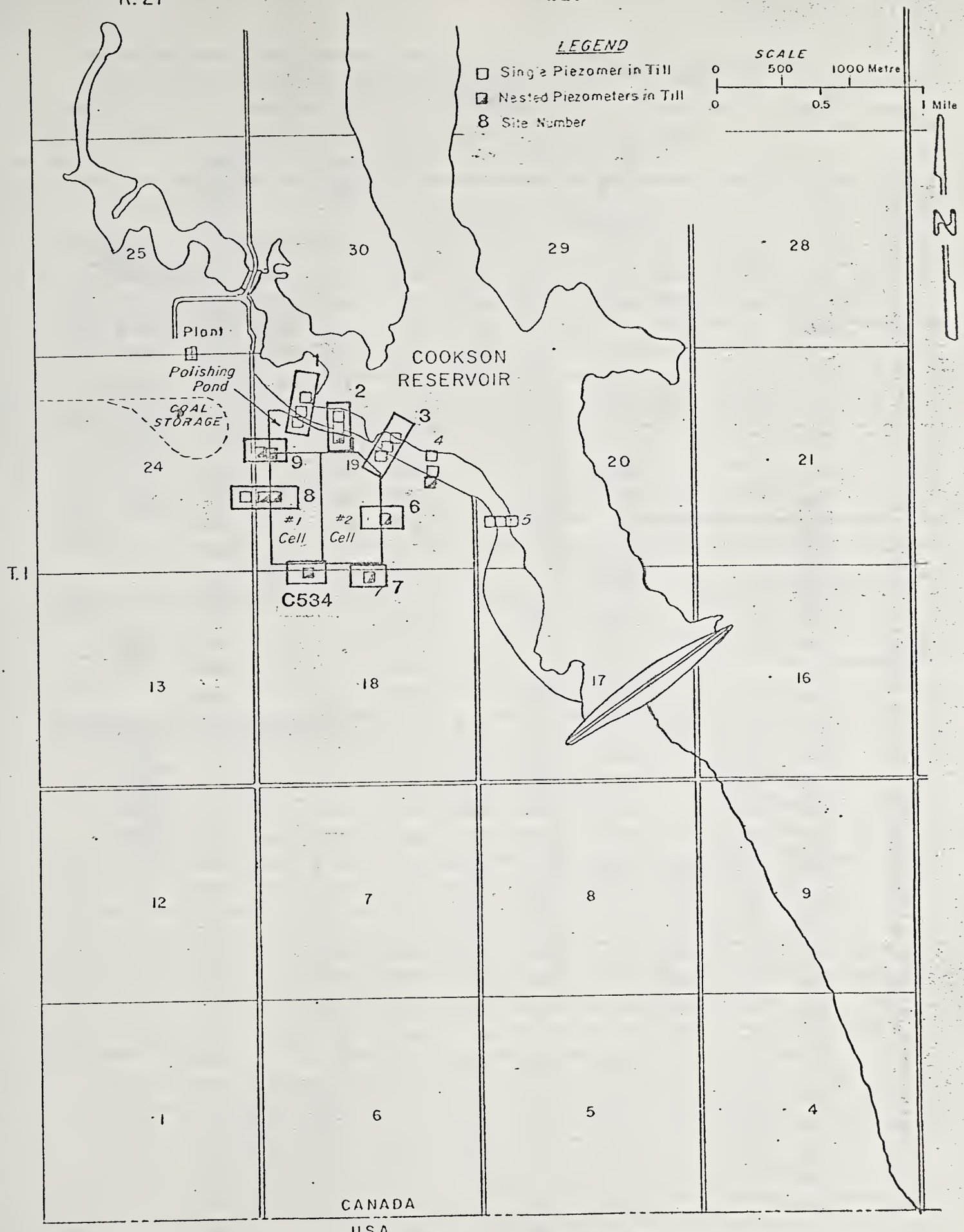
GROUNDWATER PIEZOMETER LEVEL MONITORING - ASH LAGOON AREA

SCHEDULE A - PIEZOMETERS IN TILL

Responsible Agency: Saskatchewan Environment

Piezometer	Frequency of Measurement
1a	Q
1b	Q
1c	Q
$2a_1$	M
$2a_2$	M
$2a_3$	M
$2a_4$	M
$2b_4$	M
2c	M
3a	Q
3b	Q
3c	Q
$6a_1$	Q
$6a_2$	Q
$6a_3$	Q
$6a_4$	Q
$7a_1$	Q
$7a_2$	Q
$7a_3$	Q
$7a_4$	Q
C534	M
$8a_1$	M
$8a_2$	M
$8a_3$	M
$8a_4$	M
$8b_1$	Q
$8b_2$	Q
$8b_3$	Q
$8b_4$	Q
$8c_1$	Q
$8c_2$	Q
$8c_3$	Q
$8c_4$	Q
8d	Q
$9a_1$	M
$9a_2$	M
$9a_3$	M
$9a_4$	M
$9b_1$	Q
$9b_2$	Q
$9b_3$	Q
$9b_4$	Q

Q - quarterly
M - monthly



POPLAR RIVER POWER STATION . ASH LAGOON MONITORING STUDY

PIEZOMETER INSTALLATION SITES
SCHEDULE "A" PIEZOMETERS IN TILL

Ground Piezometer Level Monitoring-Ash Lagoon Area - Schedule A-Piezometers in Till Water Elevation (m)

Water Elevation (m) 1981

Piezometer	DOE Ref. No.	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1a	C716			752.48	752.55		752.41	752.30		752.16		751.99	752.08
1b	C717			751.98			752.28	752.08		751.87			751.81
1c	C711			751.99			752.26	751.16		752.10			752.10
$2a_1$	C712A	751.89	751.89	751.89	752.18	751.86	752.13	752.29	751.58	751.93	751.88	751.71	751.86
$2a_2$	C712B	752.09	752.08	752.36	752.57	752.51	752.45	752.33	752.21	752.21	752.16	752.52	752.11
$2a_3$	C712C	751.59	751.59	751.59	751.81	751.82	751.83	751.81	751.80	751.79	751.80	751.61	751.72
$2a_4$	C712D	Dry	Dry	Dry	Dry	Dry	Dry	751.00	751.02	751.16	751.21	751.07	751.26
2b	C718	752.22	752.19	752.34	752.49	752.46	752.43	752.36	751.85	752.22	752.21	751.43	752.10
2c	C719	751.97	751.91	752.27	752.67	752.39	752.28	751.84	751.74	751.62	751.80	751.69	751.85
3a	C713			752.37	752.47		752.40	752.30		752.15		751.95	752.03
3b	C720			752.30			752.27	752.15		751.94			751.88
3c	C721			752.34			752.27	752.13		751.83			751.82
$6a_1$	C763A			753.72	753.72		753.71	753.68		753.74		753.57	753.69
$6a_2$	C763B			Dry	Dry		Dry	Dry		Dry		Dry	Dry
$6a_3$	C763C			752.89			753.27	753.19		753.19*			*
$6a_4$	C763D			754.42			754.29	754.17		753.97			753.84
$7a_1$	C729A			752.93	753.12		753.15	753.03		752.99		752.88	752.90
$7a_2$	C729B			753.25			753.76			753.58			753.34
$7a_3$	C729C			753.49			754.30			753.88			753.57
$7a_4$	C729D			753.68	754.28		754.47	754.39		753.96		753.87	753.74
C534	C534	757.86	757.74	757.60	757.62	757.57	757.66	757.62	757.28	757.71	757.55	757.46	757.53
$8a_1$	C730A	749.59		756.71	752.77	752.24	754.39	755.73	753.65	754.95	754.95		754.88
$8a_2$	C730B	756.70		757.61	756.49	757.75	756.77	757.11	756.98	758.11	758.04		757.82
$8a_3$	C730C	755.00		755.91	754.15	754.64	754.22	756.47	753.91	755.00	755.28		755.63
$8a_4$	C730D	755.78		755.82	755.78	755.85	755.78	755.89	755.41	756.06	756.06		755.99
$8b_1$	C727A	749.22	750.47	750.89	751.25	751.24	751.34	751.37	749.37	750.67		751.29	751.89
$8b_2$	C727B	751.62	751.69	751.75	751.47	752.28	752.58	752.80	751.49	752.73		753.22	753.52
$8b_3$	C727C	753.956	753.83	753.94	754.66	754.65	754.73	754.75	754.72	754.95		754.67	754.68
$8c_1$	C726A	752.55	754.05	754.92	755.10	750.89	753.05	754.01	751.23	753.58		750.22	752.44
$8c_2$	C726B	754.91	755.18	755.20	755.18	754.35	755.09	755.19	754.44	755.30		754.72	755.35
$8c_3$	C726C	754.53	754.65	754.74	754.92	754.92	755.02	755.05	755.07	755.27		755.17	755.18
$8c_4$	C726D	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry
8d	C748	753.55	753.61	753.42	753.56	753.80	753.98	753.79		754.01			
$9a_1$	C764A	752.70		752.91	752.84	752.98	752.98	753.12	753.19	753.12	752.98		753.26
$9a_2$	C764B	752.86		752.79	752.72	752.79	752.72	752.86	753.00	753.07	752.86		753.14
$9a_3$	C764C	752.42		752.53	752.42	752.56	752.63	752.70-	752.84	752.77	752.84		752.84
$9a_4$	C764D	752.24		752.17	752.38	752.66	752.24	752.38	752.38	749.00	752.1		752.03
$9b_1$	C728A			Dry	Dry		Dry	Dry		Dry		Dry	Dry
$9b_2$	C728B			750.61	750.98		749.85	750.36		749.71		750.19	750.13
$9b_3$	C728C			748.76			749.10	758.94		758.56		748.51	Dry
$9b_4$	C728D			Dry			Dry	Dry		Dry		Dry	Dry

NOTE: $8b_4$ Piezometer was deleted.
* pipe bent

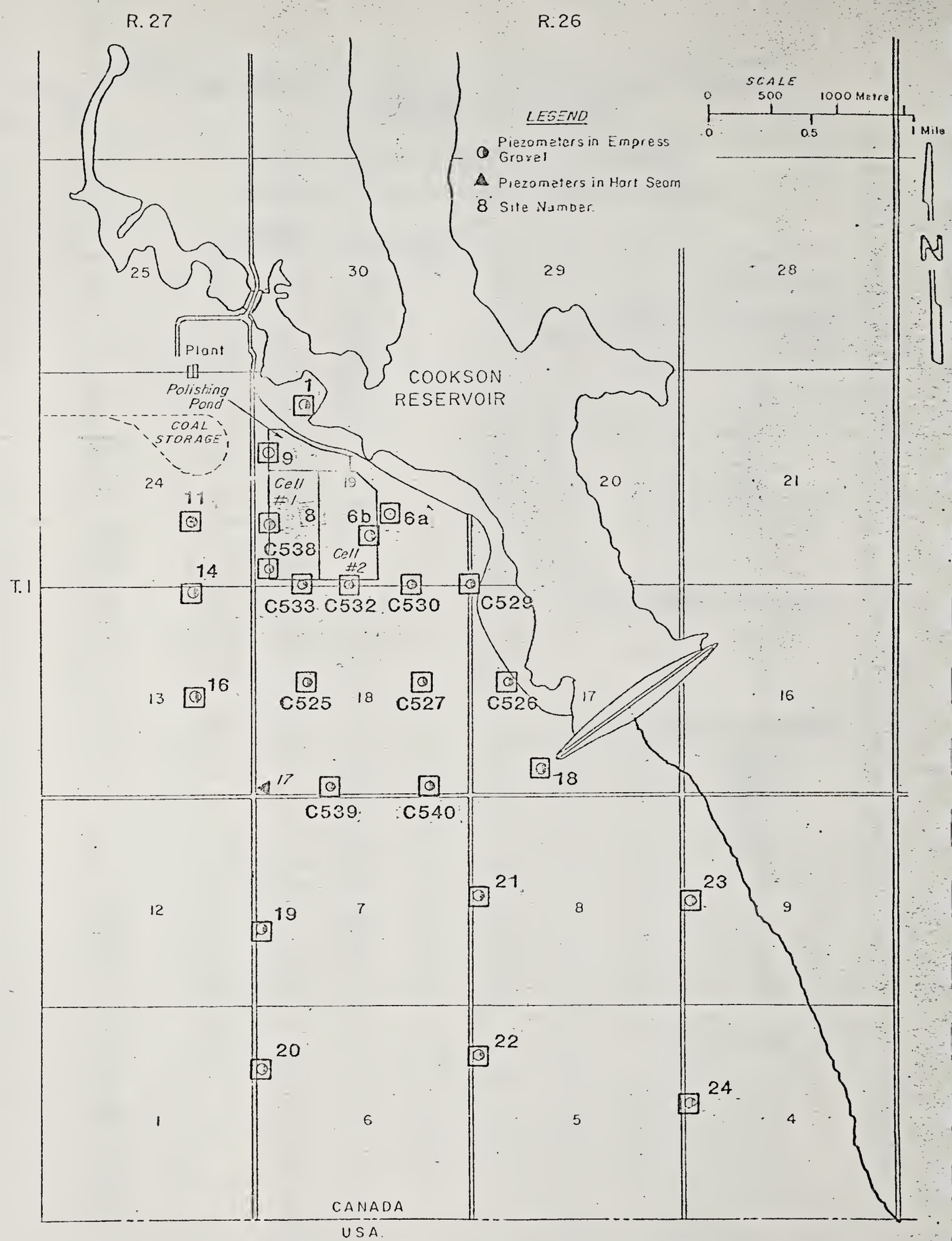
GROUNDWATER PIEZOMETER LEVEL MONITORING - ASH LAGOON AREA AND INTERNATIONAL BOUNDARY AREA

SCHEDULE B - PIEZOMETERS IN EXPRESS GRAVEL

Responsible Agency: Saskatchewan Environment

Piezometer	Frequency of Measurement
Immediate Ash Lagoon Area	
1	Q
6a	Q
6b	Q
C529	Q
C530	Q
C532	Q
C533	Q
C538	Q
8	Q
9	Q
West of Ash Lagoon Area	
11	Q
14	Q
16	Q
South of Ash Lagoon Area	
C525	Q
C526	Q
C527	Q
C539	Q
C540	Q
18	Q
19	Q
20	Q
21	Q
22	Q
23	Q
24	Q

Q - quarterly



POPLAR RIVER POWER STATION ASH LAGOON MONITORING STUDY

PIEZOMETER INSTALLATION SITES
SCHEDULE "B" PIEZOMETERS IN EMPRESS GRAVEL

Ground Water Piezometer Level Monitoring-Ash Lagoon Area
And International Boundary Area
Schedule B-Piezometers in Empress

Water Elevation (m) 1981

Piezometer	DOE Ref. No.	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	C731			752.23	752.32		752.14	751.99		751.72		751.55	751.68
6a	C763E			751.22	751.25		751.12	751.05		750.78		750.59	750.80
6b	C765A								745.93	745.86	745.5		746.06
C529	C529			750.41	750.43		750.33	750.28		750.04		749.84	750.02
C530	C530			750.60	750.62		750.51	750.45		750.12			
C532	C532			750.66	750.69		750.58	750.52		750.27		750.10	750.28
C533	C533	751.24	751.22	751.37	751.43	751.40	751.36	751.28	751.23	751.08		750.89	751.08
C538	C538	751.63	751.58	751.63	751.79	751.73	751.73	751.64	751.59	751.53		751.38	751.52
8	C730E	749.25		751.15	751.50	751.36	751.36	751.36	751.46	751.29	750.93		750.93
9	C728E	751.60	751.59	751.87	751.94	751.86	751.78	751.68	751.64	751.43		751.23	751.40
11	C743			751.92			751.94	751.87		751.71			751.74
14	C740			751.67			751.87	751.78		751.73			751.74
16	756			Dry			Dry	Dry		Dry			
C525	C525			750.67			750.86	750.77		750.75			750.69
C526	C526			748.35			748.32	Lost		Damaged			748.08
C527	C527			749.13			749.10	749.07		748.88			748.88
C539	C539			750.90			751.07			750.95			750.94
C540	C540			748.80			748.83			748.67			748.58
18	C741			746.47	746.49		746.45	Damaged		747.13		746.48	746.49
19	C735			Dry	Dry		Dry	Dry		Dry		Dry	Dry
20	C736			Plugged	Plugged		Plugged	Plugged		Plugged		Plugged	Plugged
21	C742			746.88	746.95		746.97	746.90		746.84		746.75	746.85
22	C733			746.82	746.86		746.86	743.79		746.75		746.75	746.74
23	C732			742.18	742.22		742.20	742.21		741.56		742.15	742.01
24	C734			Plugged	742.12		742.15	742.08		742.00		742.05	742.03

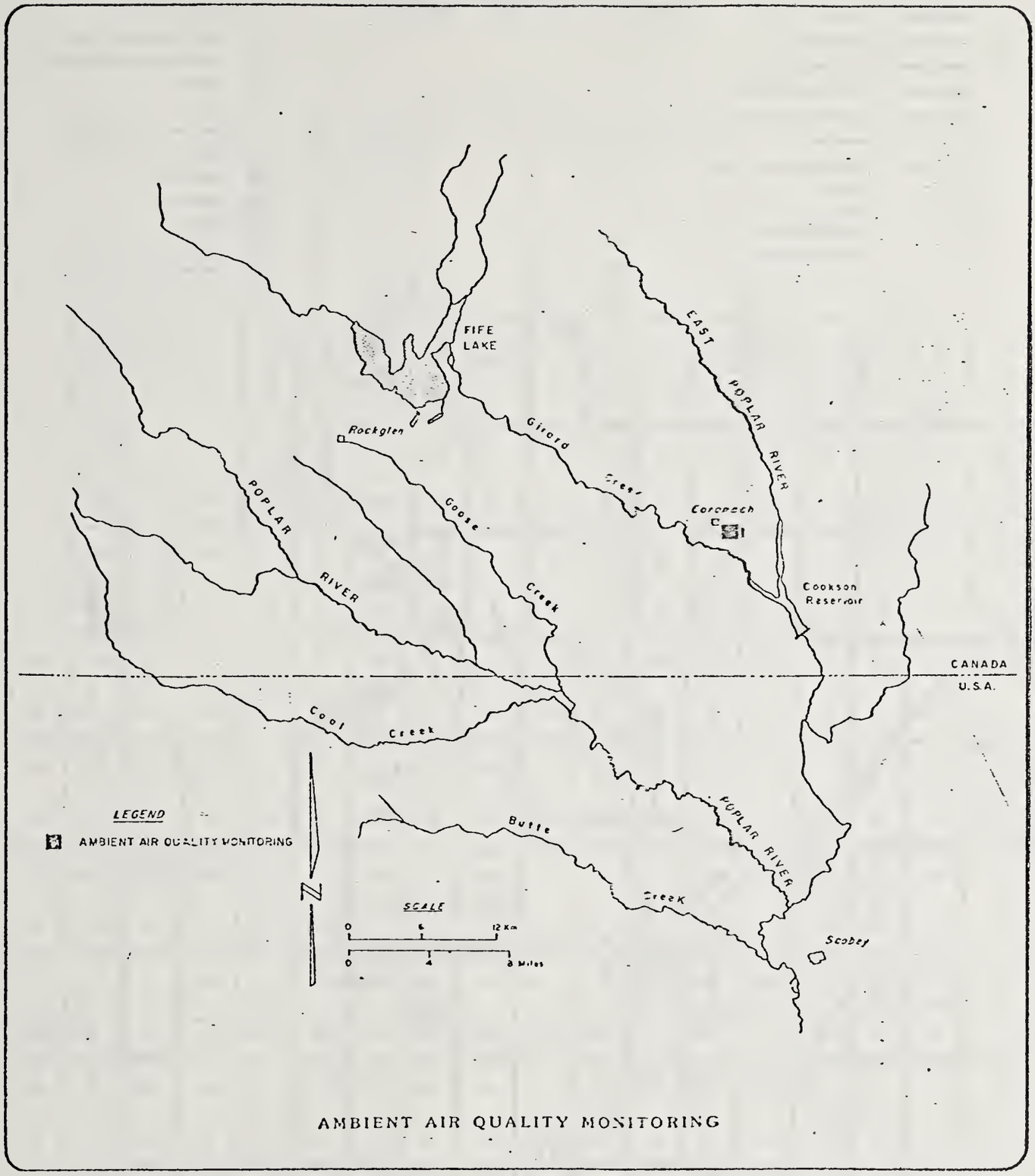
AMBIENT AIR QUALITY MONITORING

Responsible Agency: Saskatchewan Environment

No. on Map	Location	Parameters	Reporting Frequency
1	Coronach	Sulphur Dioxide	Continuous monitoring with hourly averages as summary statistics.
		Total suspended Part	24 hour samples on a 6 day cycle.

METHODS

Sulfur Dioxide	As approved by Saskatchewan Environment - continuous Permit #
Total Suspended Part.	As approved by Saskatchewan Environment - 24-hour sample once/6 days

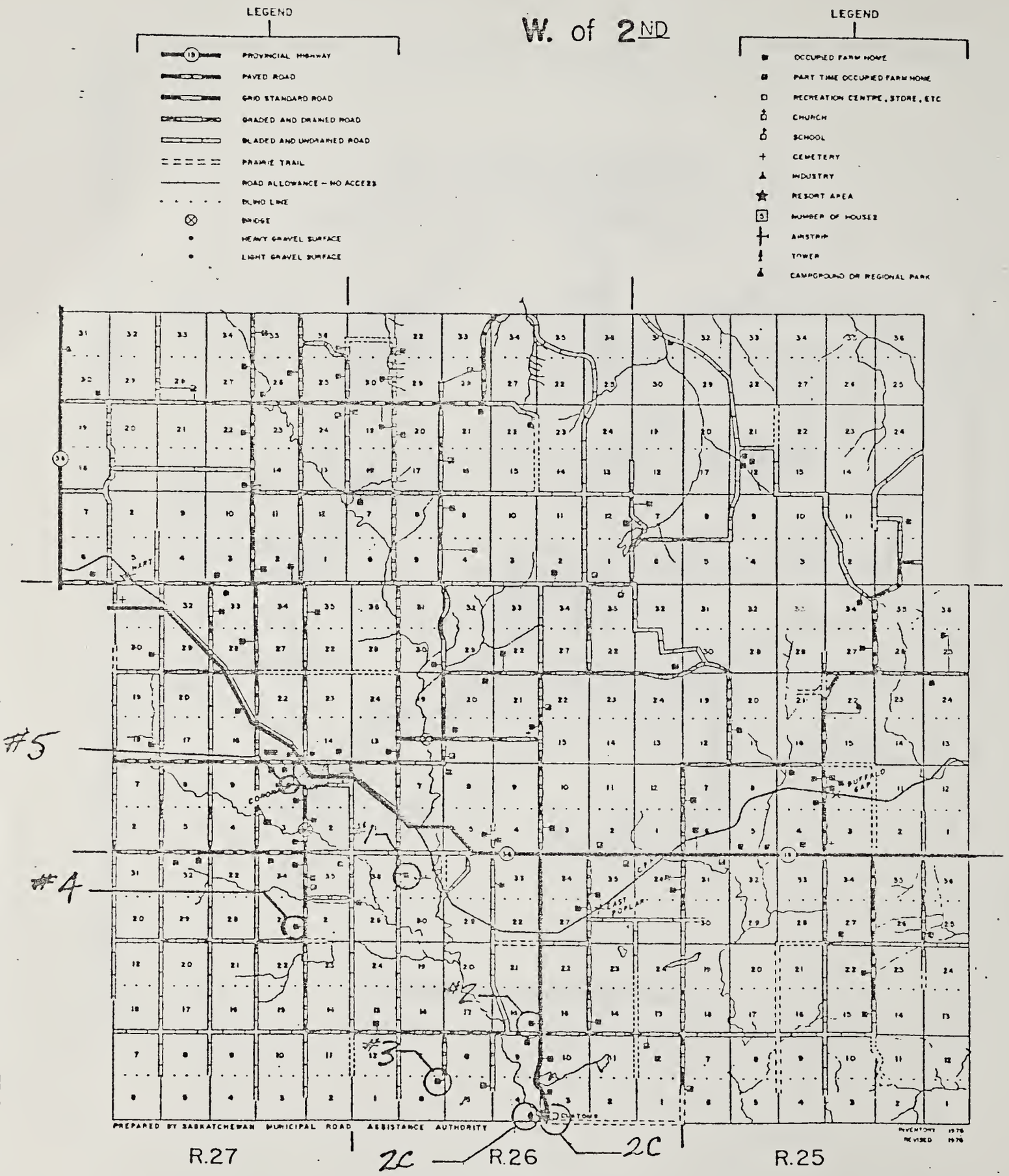


AMBIENT AIR QUALITY MONITORING

RURAL MUNICIPALITY NO. 11

HART BUTTE

W. of 2ND



#5 - SASKATCHEWAN ENVIRONMENT'S
AIR MONITORING STATION
(Sulphur Dioxide and Suspended Particulates)

4th QUARTER

CORONACH WATER TREATMENT PLANT
SUSPENDED PARTICULATE DATA

DATE 1981	CONCENTRATION ug/m^3
Oct. 1	231
Oct. 7	43
Oct. 13	116
Oct. 19	44
Oct. 25	---
Oct. 31	48
Nov. 6	118
Nov. 12	57
Nov. 18	---
Nov. 24	13
Nov. 30	17
Dec. 6	60
Dec. 12	14
Dec. 18	2
Dec. 24	10
Dec. 30	7

ARITHMETIC MEAN	56 ug/m^3
GEOMETRIC MEAN	30 ug/m^3
DOWNTIME	12%

Rick Pritchard, C.E.T.
Air Monitoring & Data Section

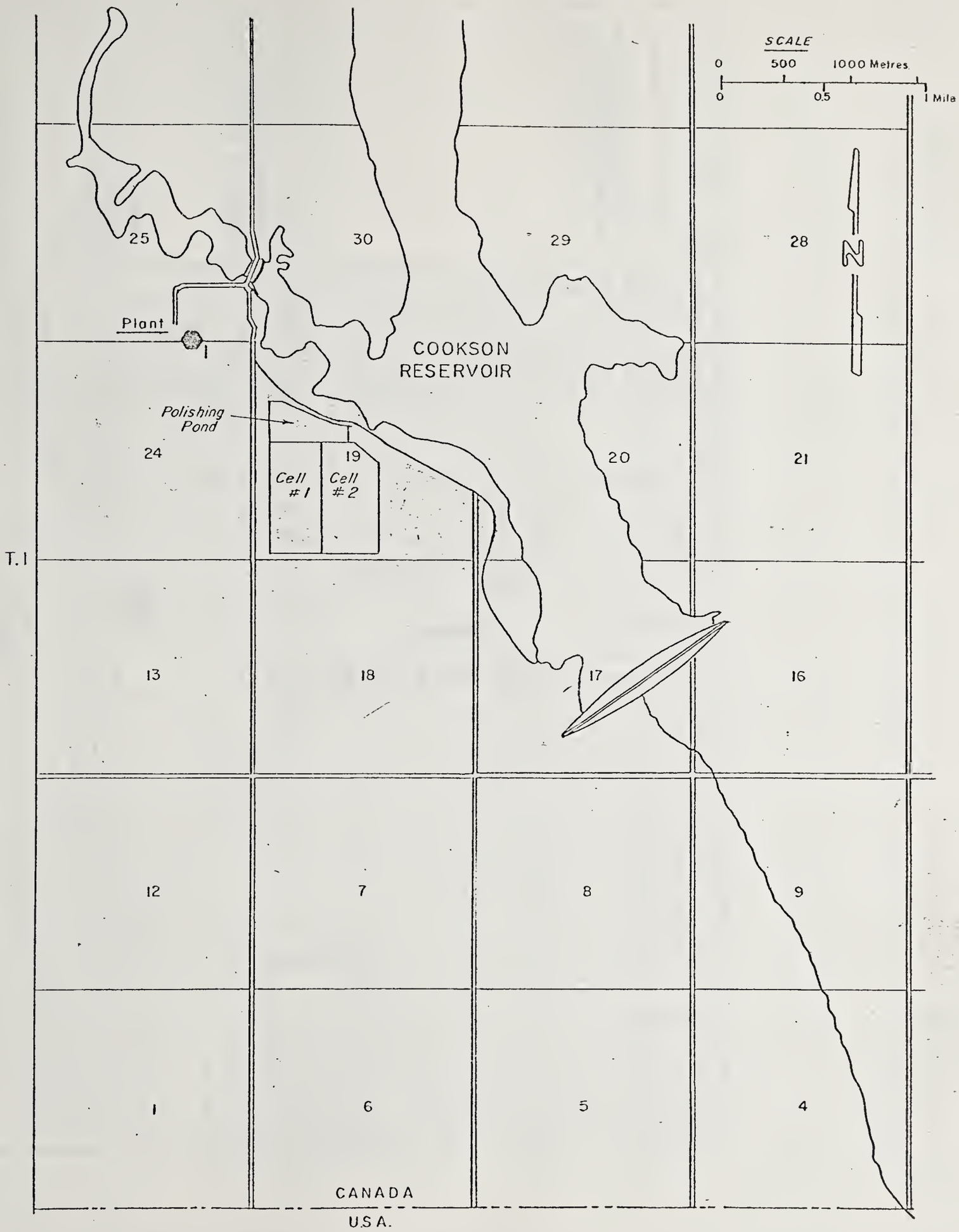
SOURCE EMISSION MONITORING

Responsible Agency: Saskatchewan Environment

No. on Map	Station Location	Parameters	Sampling Frequency
1	At Poplar River Power Plant	Sulfur Dioxide, Nitrogen Dioxide, Opacity.	Continuous reported as Hourly Averages

METHODS

Sulfur Dioxide	As approved by Saskatchewan Environment
Nitrogen Dioxide	As approved by Saskatchewan Environment
Opacity	As approved by Saskatchewan Environment
Oxygen for conversion factors	As approved by Saskatchewan Environment



SOURCE EMISSION MONITORING

AMBIENT SO_2 DATA

CORONACH

WATER TREATMENT PLANT

HOURS

DAYS

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Hrs.	Max	Min	$\bar{X}$
1																									0			
2																									0			
3																									0			
4																									0			
5																									0			
6																									0			
7																									0			
8																									0			
9																									0			
10																									0			
11																									0			
12																									0			
13																									0			
14																									0			
15																									0			
16																									0			
17																									0			
18																									0			
19																									0			
20	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	Ø	0	0	0	12	0	0	0
21	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
22	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
23	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
24	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
25	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0,5	1.0	0	0	0	0	0	Ø	0	0	0	24	1.0	0	0
26	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
27	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
28	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
29	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
30	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
31	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
$\bar{X}$																												

MONTH October 1981

FILE:

LOCATION:
Water Treatment Plant
Coronach

WEATHER DATA:

COMMENTS: No data for the beginning of October. Chart begins Oct 20, 1981 at 1400 hours.

COMPILED BY:

SASKATCHEWAN
DEPARTMENT OF THE ENVIRONMENT
AIR POLLUTION CONTROL BRANCH

MONTHLY WEATHER SUMMARY

DRN	DATE	FIGURE
CK'D	PLAN NO.	

HOURS

DAYS	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Hrs	Max	Min	X
1	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
2	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
3	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
4	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
5	0	0	0	0	0	0	0	0	Ø	0	0	X	0	0	0	0	0	0	0	0	Ø	0	0	0	23	0	0	0
6	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
7	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
8	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
9	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
10	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
11	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
12	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
13	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
14	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
15	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
16	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
17	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
18	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
19	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	X	X	22	0	0	0
20	X	X	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	22	0	0	0
21	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
22	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	24	0	0	0
23	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0
24	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0
25	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	35	30	0	0	24	35	0	3
26	Ø	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	24	0	0	0
27	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	24	0	0	0
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29	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	24	0	0	0
30	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	24	0	0	0
31																												
$\bar{x}$																												

MONTH November - 1981

FILE:

LOCATION:
Water Treatment Plant
Coronach

WEATHER DATA:

COMMENTS: Chart expired
November 5/81 @ 1100 hours
New chart installed Nov 5
@ 1300 hours

COMPILED BY:

SASKATCHEWAN
DEPARTMENT OF THE ENVIRONMENT
AIR POLLUTION CONTROL BRANCH

MONTHLY WEATHER SUMMARY

DRN.	DATE	FIGURE
CK'D	PLAN NO.	

HOURS

DAYS	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Hrs	Max	Min	X
1	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
2	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
3	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
4	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
5	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
6	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
7	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
8	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
9	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
10	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
11	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
12	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
13	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
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15	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
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17	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
18	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
19	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
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21	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
22	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
23	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
24	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
25	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
26	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
27	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
28	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
29	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
30	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
31	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	24	0	0	0
$\bar{X}$																												

MONTH December 1981

FILE:

LOCATION:
Water Treatment Plant
Coronach

WEATHER DATA:

COMMENTS: Chart expired December 1st 1981 @ 0900 hrs.

COMPILED BY:

SASKATCHEWAN
DEPARTMENT OF THE ENVIRONMENT
AIR POLLUTION CONTROL BRANCH

MONTHLY WEATHER SUMMARY

DRN	DATE	FIGURE
CK'D	PLAN NO.	

IN-STACK SO_2 DATA

Air Quality
Poplar River Power Station.

All summaries for those months when the plant is not operating or the monitoring equipment is not operating have been deleted. Please refer to earlier Canadian Data exchanges for explanations as to lack of information.

TABLE 1

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-April

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

DATE TIME	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100											-	1570	x			
0200											-	1690	x			
0300											-	1770	x			
0400											-	1770	x			
0500											-	1770	x			
0600											-	1730	x			
0700											-	1570	x			
0800											-	1530	x			
0900											-	1610	x			
1000											-	1490	x			
1100											-	1300	x			
1200											-	1300	x			
1300											-	x	x			
1400											-	x	x			
1500											-	x	x			
1600											-	x	x			
1700											-	x	x			
1800	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	-	x	x	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING
1900											-	x	x			
2000											688	x	x			
2100											914	x	x			
2200											985	x	x			
2300											1153	x	-			
2400											1370	x	-			
Peak Concentration											1490	1810	x			
Max. Hourly Average											1370	1770	x			
24 Hour Average											N/A	x	N/A			

Legend:
- Plant not running
x Stack gas system down

TABLE 1

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-May
Stack Sulphur Dioxide (mg/m^3, 3% O_2)

DATE															
TIME	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
Hourly Averages															
0100	UNIT NOT OPERATING	-	3303	2711	2802	2090	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	-	2673	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING
0200		-	3281	2752	2832	2360				-	2614				
0300		-	3245	2590	2827	2360				-	2615				
0400		-	3047	2560	2930	2300				-	2691				
0500		-	2993	2520	2757	2300				-	2647				
0600		-	3780	2608	3009	2300				-	2560				
0700		-	2880	2664	2959	2300				-	2528				
0800		-	2823	2499	2678	2280				-	2613				
0900		-	2826	2366	2795	2360				-	2754				
1000		-	2664	2469	2801	2360				-	2814				
1100		-	2780	2658	2778	2360				-	2765				
1200		-	2516	2743	2970	2320				-	2716				
1300		-	2424	2710	2824	2300				-	2688				
1400		-	2484	2868	2851	2360				2778	2664				
1500		3858	2433	2804	2940	2300				2325	2714				
1600		4314	2409	2777	2606	2300				2585	2755				
1700		3411	2461	2820	2522	-				2344	2740				
1800		3604	2461	2784	2574	-				2656	1869				
1900		3560	2567	2838	2484	-				2487	-				
2000		3501	2513	2894	2592	-				2634	-				
2100		3326	2546	2961	2333	-				2681	-				
2200		3631	2636	2912	2837	-				2776	-				
2300		4074	2510	2850	2387	-				2652	-				
2400		3700	2610	2825	2090	-				2660	-				
Peak Concentration		4350	3802	4241	3392	3620				2802	2853				
Max. Hourly Average		4314	3780	2961	3009	2360				2778	2814				
24 Hour Average		N/A	2758	2716	2716	N/A				N/A	N/A				

Percent Downtime = 59%

Legend:
- Plant not running
x Stack gas system down

TABLE III

POPLAR RIVER POWER STATION

AIR QUALITY MONTHLY SUMMARY FOR JUNE, 1981

STACK OPACITY (%)

DATE TIME	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100									-	38	x	82	67	61	58	58
0200									-	43	x	80	68	63	57	58
0300									-	44	x	80	66	63	56	58
0400									-	43	x	80	66	62	56	58
0500									-	41	x	78	66	61	56	58
0600									-	46	x	78	65	61	57	58
0700									-	45	x	76	65	61	55	58
0800									-	48	x	75	67	61	55	57
0900									65	50	x	75	67	60	54	57
1000									85	46	x	75	68	63	57	58
1100	Unit not operating	Unit not operating	Unit not operating	Unit not operating	Unit not operating	Unit not operating	Unit not operating	Unit not operating	84	45	-	78	70	63	57	58
1200									83	47	-	75	70	62	56	60
1300									83	44	-	70	68	62	53	59
1400									83	46	-	70	66	60	54	59
1500									83	x	-	70	68	61	54	59
1600									82	x	-	72	67	63	56	59
1700									82	x	-	68	67	60	54	59
1800									82	x	-	70	65	60	56	58
1900									82	x	-	70	65	58	57	58
2000									64	x	-	69	64	57	56	57
2100									36	x	83	69	65	57	57	58
2200									33	x	83	68	64	58	57	63
2300									37	x	82	68	63	58	57	61
2400									38	x	83	68	63	58	61	58
Peak Concentration									85	85	85	85	85	85	85	85
Max. Hourly Average									85	50	83	82	70	63	61	63
24 Hour Average									NA	NA	NA	74	66	61	56	59

Legend:

- Plant not running

x Stack gas system down

TABLE III CONTINUED

DATE														
TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Hourly Averages														
0100	58	58	61	54	56	54	54	70	68	56	65	55	68	58
0200	60	58	59	58	63	56	55	70	68	62	66	65	66	57
0300	65	57	59	64	66	56	65	73	68	62	60	63	66	57
0400	62	58	60	64	65	56	66	71	68	63	58	63	67	57
0500	60	58	60	65	66	56	65	71	68	63	56	66	66	57
0600	60	65	59	65	66	56	65	70	75	63	59	68	66	57
0700	57	63	57	64	66	56	66	71	75	64	58	66	65	60
0800	55	61	59	64	66	56	62	72	75	60	58	67	67	63
0900	83	60	59	63	62	56	53	70	72	68	58	68	72	60
1000	65	63	58	60	58	58	53	66	70	69	63	65	75	61
1100	60	63	57	58	54	61	53	63	70	58	65	59	74	
1200	58	62	55	54	55	53	58	70	66	55	65	59	58	
1300	60	62	55	55	55	53	54	73	65	50	64	59	54	
1400	75	59	56	55	54	54	54	62	60	51	61	59	54	
1500	63	57	56	55	55	54	63	60	58	51	63	59	52	
1600	66	59	57	56	55	54	58	63	58	54	63	59	52	
1700	62	63	55	60	60	55	57	63	57	55	63	61	55	
1800	58	63	53	60	58	55	56	65	58	54	63	62	57	
1900	55	63	54	58	55	54	55	65	52	54	70	60	55	
2000	63	66	54	55	54	61	56	71	52	58	65	60	53	
2100	60	69	54	55	54	54	58	68	56	68	70	58	53	
2200	58	64	51	55	53	51	60	70	70	70	70	58	57	
2300	58	63	54	55	55	53	63	68	85	69	55	62	58	
2400	58	63	54	55	55	54	66	68	80	67	56	66	58	
Peak Concentration	85	85	85	85	85	85	85	85	85	85	86	86	86	
Max. Hourly Average	83	69	61	65	66	61	66	73	84	70	70	68	75	
24 Hour Average	62	62	57	59	59	55	59	68	66	60	62	62	61	

Remainder of data on next roll

Percent Downtime = 4%

Legend:

- Plant not running

x Stack gas system down

MONTH, YEAR
August 1981

LOCATION
Water Treatment Plant
Cornach, Sask

PROVINCIAL ☑
NAPS. ☐

POLLUTANT: SO_2
UNITS: pphm

COMMENTS:

Aug 18 - Aug 19
Chart drive jammed.

Aug 21 to Aug 31
Recorder down
chart mechanism
faulty.

DAYS	HOURS																								HRS	MAX	MIN
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0	0	0	.5	.5	0	0	Ø	.5	0	0	0	.5	.5	.5	0	0	0	0	Ø	.5	.5	.5	.5	24	.5	0
2	.5	.5	1.5	.5	.5	0	0	Ø	0	0	.5	1.0	1.0	1.0	.5	.5	1.0	1.0	.5	Ø	.5	0	.5	.5	24	1.5	0
3	.5	.5	.5	.5	.5	.5	.5	Ø	0	.5	.5	1.0	2.0	.5	0	0	0	0	0	Ø	0	0	0	0	24	2.0	0
4	0	0	0	0	0	0	0	Ø	0	0	0	0	0	.5	.5	0	.5	.5	.5	Ø	0	0	0	0	24	.5	0
5	0	.5	1.0	.5	0	0	0	Ø	0	.5	0	.5	0	0	0	0	0	0	0	Ø	0	0	0	0	24	1.0	0
6	0	.5	.5	0	0	0	0	Ø	0	0	0	0	0	0	0	0	.5	0	0	Ø	0	0	0	0	24	.5	0
7	.5	1.0	1.0	.5	0	0	0	Ø	1.0	1.0	1.0	0	1.0	1.0	0	0	.5	0	0	Ø	0	0	0	0	24	1.0	0
8	.5	0	0	.5	0	.5	1.0	Ø	.5	1.0	1.0	1.0	1.0	1.0	1.0	.5	0	0	0	Ø	0	0	.5	0	24	1.0	0
9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	Ø	0	1.0	0	0	0	0	0	.5	1.0	0	0	Ø	0	0	0	0	24	1.0	0
10	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	24	0	0
11	0	0	0	0	0	0	0	Ø	0	.5	.5	.5	.5	.5	1.0	0	1.0	1.0	0	Ø	0	.5	.5	2.0	24	1.0	0
12	0	0	3.0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	24	3.0	0
13	0	0	.5	.5	.5	.5	.5	Ø	0	0	3.0	0	0	0	0	3.0	.5	.5	.5	Ø	X	X	X	X	20	3.0	0
14	X	X	X	X	\	\	\	\	\	\	\	\	\	\	\	\	X	X	X	Ø	1.0	1.0	.5	.5	6	1.0	0
15	.5	.5	0	.5	.5	0	0	Ø	.5	1.0	0	0	0	0	0	0	0	0	0	Ø	0	0	.5	1.0	24	1.0	0
16	0	.5	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	Ø	1.0	0.5	0.5	0.5	24	1.0	0
17	0.5	0.5	2.0	.5	.5	.5	1.0	Ø	.5	1.0	1.0	1.0	1.0	1.0	1.0	0	0	0	0	0	0	0	0	0	24	2.0	0
18	Ø	0	0	0	0	.5	0	0	0	0	X	X	X	X	\	\	\	X	X	X	X	X	X	X	10	.5	0
19	X	X	X	X	X	X	X	X	X	X	.5	.5	.5	.5	0	0	0	.5	.5	0	1.5	2.0	2.0	Ø	14	2.0	0
20	0	0	0	0	0	0	0	0	0	0	0	Ø	0	.5	0	0	0	0	0	0	0	3.0	0	Ø	24	3.0	0
21	.5	.5	.5	.5	.5	.5	.5	.5	.5	1.0	5.0	1.0	.5	.5	1.0	.5	.5	.5	.5	.5	X	X	X	X	20	5.0	0
22																									0		
23																									0		
24																									0		
25																									0		
26																									0		
27																									0		
28																									0		
29																									0		
30																									0		
31																									0		

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COMMERCIAL ☐
INDUSTRIAL ☑
RESIDENTIAL ☐

MONTH, YEAR
July 1981

LOCATION
Water Treatment Plant
Cornach, Sask.

PROVINCIAL ☑
NAPS ☐

POLLUTANT: SO_2
UNITS: ppm

COMMENTS:
July 1 - July 21 Recorder was down during this period.

July 30
Recorder time adjusted — Recorder chart drive stopped

COMMERCIAL ☐
INDUSTRIAL ☑
SENTI ☐

DAYS	HOURS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	HRS	MAX	MIN
1																									0		
2																									0		
3																									0		
4																									0		
5																									0		
6																									0		
7																									0		
8																									0		
9																									0		
10																									0		
11																									0		
12																									0		
13																									0		
14																									0		
15																									0		
16																									0		
17																									0		
18																									0		
19																									0		
20																									0		
21	X	X	X	/	/	/	/	X	X	X	X	X	0.5	.5	.5	1.0	1.5	.5	1.0	Ø	1.5	2.0	2.0	2.0	12	2.0	.5
22	1.0	.5	0	0	1.0	2.0	2.0	Ø	1.0	1.0	2.0	1.0	.5	1.5	1.0	1.0	1.0	2.0	1.0	Ø	.5	1.0	1.0	1.0	24	2.0	0
23	0	.5	1.0	0	0	0	1.0	Ø	1.0	0	1.5	0	0	0	1.0	2.0	2.0	1.5	1.0	Ø	1.0	.5	.5	1.5	24	2.0	0
24	2.5	1.0	0	.5	1.5	1.5	1.5	Ø	0	0	.5	.5	1.5	1.0	1.0	2.0	1.0	0	0	Ø	.5	.5	0	.5	24	2.5	0
25	0	.5	1.0	1.0	1.0	1.0	1.0	Ø	2.0	2.0	0	0	0	0	0	0	0	1.0	1.0	Ø	.5	.5	.5	1.0	24	2.0	0
26	.5	.5	.5	.5	.5	.5	.5	Ø	0	0	0	0	0	1.0	1.0	1.0	1.0	1.0	1.0	Ø	.5	.5	.5	1.0	24	1.0	0
27	.5	1.0	1.0	1.0	1.0	1.0	1.5	Ø	0	.5	1.0	0	0	0	0	0	0	0	0	Ø	0	0	0	0	24	1.5	0
28	0	0	0	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	.5	0	Ø	.5	.5	0	0	24	.5	0
29	.5	.5	.5	0	0	0	0	Ø	1.0	.5	1.0	.5	0	0	0	0	0	0	0	Ø	.5	.5	0	0	24	1.5	0
30	0	0	0	0	0	0	0	Ø	X	X	X	X	X	/	X	/	/	/	/	X	X	X	X	X	8	0	0
31	1.0	0	1.0	1.0	0	0	0	0	1.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0	24	1.5	0

Percent downtime = 32%

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

x Stack gas system down
* burning oil

DATE / TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages.																
0100	–	–	–	–	–	–	–	–	–	–	x	1571	x	x	x	x
0200	–	–	–	–	–	–	–	–	–	–	x	1532	x	x	x	x
0300	–	–	–	–	–	–	–	–	–	–	x	1532	x	x	x	x
0400	–	–	–	–	–	–	–	–	–	x	x	1610	x	x	x	x
0500	–	–	–	–	–	–	–	–	–	x	1571	1610	x	x	x	x
0600	–	–	–	–	–	–	–	–	–	x	1492	1610	x	x	x	x
0700	–	–	–	–	–	–	–	–	–	x	1532	1610	x	x	x	x
0800	–	–	–	–	–	–	–	–	–	x	1610	x	x	x	x	x
0900	–	–	–	–	–	–	–	–	–	x	1649	x	x	x	x	x
1000	–	–	–	–	–	–	–	–	–	x	1649	x	x	x	x	x
1100	–	–	–	–	–	–	–	–	–	x	1649	x	x	x	x	x
1200	–	–	–	–	–	–	–	–	–	x	1099	x	x	x	x	x
1300	–	–	–	–	–	–	–	–	–	x	1121	x	x	x	x	x
1400	–	–	–	–	–	–	–	–	–	x	1178	x	x	x	x	x
1500	–	–	–	–	–	–	–	–	–	x	1257	x	x	x	x	x
1600	–	–	–	–	–	–	–	–	–	x	1374	1649	x	x	x	x
1700	–	–	–	–	–	–	–	–	–	x	1453	1453	x	x	x	x
1800	–	–	–	–	–	–	–	–	–	x	1414	1492	x	x	x	x
1900	–	–	–	–	–	–	–	–	–	x	1492	1414	x	x	x	x
2000	–	–	–	–	–	–	–	–	–	x	1610	1414	x	x	x	x
2100	–	–	–	–	–	–	–	–	–	x	1649	1374	x	x	x	x
2200	–	–	–	–	–	–	–	–	–	x	1610	1374	x	x	x	x
2300	–	–	–	–	–	–	–	–	–	x	1610	1374	x	x	x	x
2400	–	–	–	–	–	–	–	–	–	x	1620	1374	x	x	x	x
Peak Concentration	–	–	–	–	–	–	–	–	–	x	–	–	x	x	x	x
Max. Hourly Average	–	–	–	–	–	–	–	–	–	x	–	–	x	x	x	x
24 Hour Average	–	–	–	–	–	–	–	–	–	x	–	–	x	x	x	x

Percent Downtime 32%

AIR QUALITY MONTHLY SUMMARY FOR SEPTEMBER 1981

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

- Plant not running
x Stack gas system down
* Burning oil.

DATE / TIME 06	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	x	2435	3259*	3377	2277	2159	0*	2552	2553	2513	2332	2356	2419	2419	
0200	x	2513	3338*	3377	2277	2159	0*	2631	2483	2356	2289	2356	2449	2398	
0300	x	2592	3338*	3377	2199	2159	0*	2827	2475	2356	2301	2356	2392	2371	
0400	x	2670	3338*	3377	2199	2317	0*	2749	2423	2356	2283	2356	2407	2380	
0500	x	2749	3338*	3377	2160	2317	0*	2670	2529	2356	2239	2356	2386	2386	
0600	x	2827	3338*	3377	2160	2356	0*	2552	2458	2356	2229	2356	2361	2345	
0700	x	2945	3299*	3377	2121	2356	0*	2513	2382	2356	2261	2356	2353	2447	
0800	x	3063	3259*	3377	2042	2356	0*	2435	2395	2317	2344	2356	2403	2435	
0900	x	3063	3220*	3377	2042	2278	0*	2592	2441	2317	2220	2277	2408	2329	
1000	x	3142	3220*	3416	1964	2278	1963*	2670	2610	2356	2296	Cal	750	2442	
1100	x	3220	3181*	3456	1964	2278	1767	2749	2354	2437	2384	Cal	1205	2594	
1200	x	3338	3534*	3927	2042	2278	1963	2670	2208	2356	2471	Cal	2430	2468	
1300	x	3534	3534*	3927	2042	2278	1963	2670	2292	2356	2491	Cal	2482	2447	
1400	x	3495	3495*	x	2121	2356	2356	2749	2304	2356	2459	Cal	2509	2471	
1500	x	3338	3495*	x	2121	2356	2356	2670	2288	2356	2431	Cal	2504	2471	
1600	x	3338	3534*	x	2238	2356	2356	2552	2281	2400	2412	x	2511	2465	
1700	x	3338	3495*	2435	2238	2356	2356	2552	2314	2400	2404	x	2477	2461	
1800	x	3338	2456*	2435	2121	2356	2356	2592	2398	2400	2403	x	2448	2478	
1900	2278	3338	3495	2435	2042	2356	2159	2552	2436	2435	2383	x	2487	2549	
2000	2278	3338	3534	2278	2121	2356	2199	2513	2385	2435	2446	x	2466	2519	
2100	2278	x	3534	2199	2042	2356	2356	2435	2382	2278	2540	2552	2418	2389	
2200	2317	x	3613	2159	2042	2356	2317	2470	2575	2278	2466	2552	2464	2365	
2300	2356	x	3299	2199	2159	0*	2435	2474	2678	2356	2391	2513	2425	2331	
2400	2395	3259*	3299	2278	2042	o*	2356	2474	2678	2356	2391	2513	2425	2331	
Peak Concentration	x	x	3927	x	2984	2877	2557	3117	2960	3338	3500	x	2748	2748	
Max. hourly Average	x	x	3613	x	2277	2356	1386	2749	2678	2513	2540	x	2511	2594	

...ntents 21.5%

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

x Stack gas system down
M Maintenance on stack

...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	stem 16
...ourly Averages																
...	2338	2608	x	2944	2740	4037	3436	2516	2569	2153	2404	2355	233	2499	25..	2078
...	2318	2539	x	2783	2805	4112	3436	2484	2527	2274	2354	2277	230	2592	29..	2115
...	2369	2377	3024	2901	2762	4093	4037	2426	2450	2272	2343	2293	204	2108	x	2117
...	2392	2504	2906	2862	2797	3870	4112	2413	2446	2210	2395	2296	1447	2407	x	2108
...	2366	2524	2827	2744	2765	3296	4093	2408	2448	2246	2361	2217	1758	2278	x	2085
...	2354	2576	x	2705	2733	3068	3870	2415	2465	2160	2327	2233	1877	2358	x	2008
...	2467	2636	2827	2705	2706	2943	3296	2421	2493	2185	2315	2196	1546	2866	x	2034
...	2577	2631	x	2744	2785	2743	3068	2394	2424	2195	2348	2191	1794	3116	x	2030
...	2524	2602	2631	2783	2791	2521	2943	2427	2397	2151	2354	2224	1613	3431	x	1990
...	2604	2529	2749	2384	2671	176	1943	2511	2465	2153	2327	2228	1883	2328	2431	2095
...	680	2007	2670	2749	1791	1859	2466	2547	2519	2302	2315	2174	1349	4712	2431	2127
...	367	x	2670	2782	1827	2525	2412	2597	2578	2378	2366	2180	1992	3143	2362	2200
...	424	x	2626	2547	2213	2854	Delete	2638	2567	2387	2314	2139	2229	3001	2314	2139
...	1211	x	2670	2594	2232	3289	Delete	2602	2617	2453	2333	2094	2289	688	2208	2019
...	2401	x	2744	2624	2475	3500	Delete	2670	2644	2401	2330	2159	2538	688	2175	2225
...	2545	x	2744	2541	3820	3495	Delete	2645	2457	2276	2294	2140	2374	2785	2207	2386
...	2536	x	2783	2556	4009	3446	Delete	2620	2427	2338	2304	2149	2772	108	2133	2374
...	2550	x	2783	2630	4180	3410	2476	2542	2426	2332	2309	2254	2964	562	2175	2414
...	2549	x	2783	2753	4313	3426	2519	2546	2425	2292	2259	2232	2658	990	2228	2384
...	2561	x	2744	2837	4251	3511	2508	2613	2442	2305	2265	2185	2203	1412	2199	2383
2100	2547	x	2744	2664	3973	3616	2527	2580	2431	2298	2391	2103	2512	2381	2165	2385
2200	2477	x	2705	2584	3592	3581	2593	2546	2290	2339	2361	2078	2520	2496	2153	2338
2300	2461	x	2666	2645	3436	3198	2619	2589	2334	2416	2334	1615	1823	2723	2109	2327
2400	2461	x	2705	2645	3436	3198	2619	2589	2334	2416	2334	1615	1823	2723	2109	2327
Peak Concentration	2827	–	–	3062	4313	4112	–	2827	3023	2592	2592	3926	3926	3926	–	3024
Max. Hourly Average	2604	–	–	2901	4313	4093	–	2670	2578	2416	2404	2355	2964	4712	–	2414
24 Hour Average	2169	–	–	2588	3046	3014	–	2531	2466	2289	2335	2151	1864	2266	–	2195

AIR QUALITY MONTHLY SUM[illegible] FOR OCTOBER 1981

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

– Plant not running
x Stack gas system down
M Maintenance on stack system

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Averages															
[illegible]	2294	2175	2358	2370	x	x	x	2239	2146	2843	3047	M	M	M	2147
[illegible]	2279	2169	2271	2317	x	x	x	223	2071	2843	3620	M	M	M	2137
[illegible]	2193	2103	2251	2254	x	x	x	2226	2002	2841	3039	M	M	M	2280
[illegible]	2199	2130	2232	2254	x	x	x	2203	3111	2953	2387	M	M	M	2355
[illegible]	2216	2069	2180	2255	x	x	x	2183	1133	2859	2700	M	M	M	2385
[illegible]	2176	2036	2175	2215	x	x	x	2152	x	2903	2595	M	M	M	2441
[illegible]	2106	2015	2175	2141	x	x	x	2169	x	2934	3604	M	M	M	2317
[illegible]	2162	1647	2169	2031	x	x	x	2105	x	2942	2631	M	M	M	2270
[illegible]	2180	1979	2171	2059	x	x	x	2163	x	2748	2167	M	M	M	2288
[illegible]	2209	1954	1997	2000	x	x	x	2216	x	2489	2284	M	M	M	2339
[illegible]	2213	2150	2069	2049	x	x	x	2056	x	2528	2238	M	M	M	2353
[illegible]	2272	2215	2150	2132	x	x	x	2048	x	2498	2301	M	M	2117	2349
[illegible]	2320	2225	2074	2116	x	x	x	2042	x	2520	2272	M	M	2073	2420
[illegible]	2375	2316	2192	2127	x	x	1223	2033	1203	2516	2382	M	M	2299	2438
[illegible]	2118	2378	2260	1859	x	x	2176	1983	1176	3121	2221	M	M	2339	2446
[illegible]	2162	2412	2286	1405	x	x	1614	1999	1624	3745	2103	M	M	2225	2296
[illegible]	2231	2430	2286	1164	x	x	2120	2013	2618	3342	M	M	M	2263	2442
[illegible]	2241	2438	2303	1120	x	x	2134	2016	2664	2616	M	M	M	2175	2363
[illegible]	2278	2443	2333	965	x	x	2128	2025	2755	2612	M	M	M	2109	2389
[illegible]	2180	2441	2335	696	x	x	2162	2016	2823	2577	M	M	M	2119	2390
[illegible]	2155	2398	2327	1013	x	x	2207	1993	2762	2586	M	M	M	2152	2351
[illegible]	2171	2340	2330	1148	x	x	2256	1987	2756	2950	M	M	M	2103	2333
[illegible]	2172	2315	2350	1215	x	x	2234	2012	2790	2813	M	M	M	2068	2365
[illegible]	2172	2315	2350	1215	x	x	2234	2012	2790	2813	M	M	M	2068	2365
[illegible] Concentration	3102	3063	2788	3534	–	–	–	3102	–	3927	–	–	–	–	–
[illegible] Hourly Average	2375	2443	2358	2370	–	–	–	2239	–	3745	–	–	–	–	–

Percent Downtime = 23.6 %

AIR QUALITY MONITOR SUMMARY FOR POPLAR RIVER POWER STATION

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

For November

- Plant not running
x Stack gas system down

DATE TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages.																
0100	2389	2326	2256	2232	2163	2023	1625	-	1117	2269	2269	2293	2410	-	-	-
0200	2360	2301	2292	2285	2179	2029	-	-	993	2286	2219	2271	2437	-	-	-
0300	2321	2279	2314	2303	2173	2014	-	-	1109	2268	2231	2206	2421	-	-	-
0400	2325	2304	2324	2295	2174	2031	-	-	1217	2279	2259	2224	2324	-	-	-
0500	2346	2333	2325	2265	2177	2103	-	-	1184	2251	2244	2259	2386	-	-	-
0600	2373	2326	2304	2245	2158	2098	-	-	1123	2218	2238	2274	2397	-	-	-
0700	2380	2311	2309	2250	2163	2089	-	-	1556	2164	2268	2330	2388	-	-	-
0800	2422	2264	2255	2226	2150	2072	-	-	2329	2172	2268	2301	2335	-	-	-
0900	2393	2264	2262	2217	2079	2077	-	-	2498	2187	2258	2258	2277	-	-	-
1000	2405	2270	1312	2186	2020	2063	-	-	2513	2206	2267	1903	2289	-	-	-
1100	2420	2205	325	2064	2189	2100	-	-	2573	2217	2254	2234	2327	-	-	-
1200	2400	2205	490	2123	2229	2190	-	-	1305	2247	2250	2316	2305	-	-	-
1300	2396	2224	1445	2197	2297	2193	-	-	2199	2261	2256	2367	2317	-	-	-
1400	1310	2231	2287	2219	2336	2236	-	-	2282	2318	2289	2431	2315	-	-	-
1500	2437	2331	2330	2020	2330	2223	-	-	2317	2314	2314	2342	-	-	-	-
1600	2421	1835	2284	1970	2226	2160	-	708	2260	2183	2166	2259	-	-	-	-
1700	2324	2213	2261	2183	2202	2289	-	850	2396	2297	2318	2374	-	-	-	-
1800	2386	2303	2342	2211	2158	2209	-	911	2364	2315	2360	2378	-	-	-	-
1900	2397	2288	2354	2217	2132	2233	-	1037	2368	2303	2345	2368	-	-	-	-
2000	3488	2261	2303	2217	2096	2238	-	1053	2337	2278	2351	2367	-	-	-	-
2100	2335	2258	2313	2177	2114	2231	-	743	2360	2270	2315	2348	-	-	-	-
2200	2277	2235	2315	2146	1906	2200	-	945	2323	2256	2292	2351	-	-	-	-
2300	2289	2237	2287	2153	2084	2193	-	975	2272	2277	2296	2355	-	-	-	-
2400	2319	2237	2287	2153	2084	2193	-	975	2272	2277	2296	2355	-	-	-	-
Peak Concentration	2640	2560	2560	2440	2480	2480	-	-	3480	3480	3480	3360				
Max. Hourly Average	2437	2333	2354	2303	2336	2289	-	-	2573	2318	2360	2431				
24 Hour Average	2408	2252	2066	2190	2159	2062	-	-	1969	2255	2276	2299				

TABLE 1

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR
Stack Sulphur Dioxide (mg/m^3, 3% O_2)
for November

Legend:
- Plant not running
x Stack gas system down

DATE / TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0200	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0300	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0400	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0500	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0600	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0700	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0800	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
0900	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
1000	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
1100	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
1200	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
1300	-	-	-	-	-	-	-	-	-	-	x	x	x	x	
1400	-	-	-	-	-	-	-	-	-	-	x	x	x	2727	
1500	-	-	-	-	-	-	-	-	-	-	x	x	x	2895	
1600	-	-	-	-	-	-	-	-	-	-	x	x	x	2910	
1700	-	-	-	-	-	-	-	-	-	-	x	x	x	2932	
1800	-	-	-	-	-	-	-	-	-	-	x	x	x	2919	
1900	-	-	-	-	-	-	-	-	-	-	x	x	x	1901	
2000	-	-	-	-	-	-	-	-	-	-	x	x	x	2815	
2100	-	-	-	-	-	-	-	-	-	-	x	x	x	2594	
2200	-	-	-	-	-	-	-	-	-	-	x	x	x	2613	
2300	-	-	-	-	-	-	-	-	-	-	x	x	x	2768	
2400	-	-	-	-	-	-	-	-	-	-	x	x	x	2967	
Peak Concentration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Max. Hourly Average	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Percent downtime - 33%

DECEMBER

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

Plant not running
x Stack gas system down
C Computer problem

DATE / TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages																
[illegible]	3035	2847	2597	2559	2373	2335	2228	2152	2320	1958	2115	1996	1744	x	x	x
[illegible]	3075	2837	2719	2532	2329	2334	2233	2220	2240	2007	2105	2033	1743	x	x	x
[illegible]	3003	2875	2772	2614	2242	2336	2229	2100	2200	2047	2109	2069	1802	x	x	x
[illegible]	3038	2872	2896	2616	2281	2377	2246	2052	2120	2019	2129	2113	1780	x	x	x
[illegible]	3057	2891	3003	2637	2340	2390	2256	2068	2080	2022	2109	2082	1695	x	x	x
[illegible]	3034	2869	2845	2693	2374	2302	2306	2078	2040	2068	2110	2039	1668	x	x	x
[illegible]	3001	2913	2832	2560	2382	2295	2266	2072	2000	1992	2142	2005	1653	x	x	x
0800	2960	2891	2849	2567	2464	2300	2199	2110	2000	1978	2129	1989	1742	x	x	x
0900	C	2812	2765	2605	2579	2336	2181	2134	2000	2006	2151	2013	1799	x	x	x
1000	2916	2738	2710	2532	2589	2377	2230	2155	1838	2023	2174	2066	1860	x	x	x
1100	2920	2821	2773	2576	2679	2435	2137	2186	1692	2052	2209	2110	1910	x	x	x
1200	2908	2363	2834	2400	2615	2457	2165	2169	388	2035	2247	1836	1860	x	x	x
1300	2900	1954	2860	2506	2565	2440	2185	2320	-	2119	2219	1833	1895	x	x	x
1400	2928	2407	2766	1779	2472	2346	2203	2320	-	2100	2197	1740	1868	x	x	x
[illegible]	2976	2813	2693	2278	2523	2390	2165	2280	-	2058	2224	1866	1861	x	x	x
[illegible]	2942	2943	2842	2161	2407	2192	2027	2480	-	1919	2052	1646	1680	x	x	x
1700	2964	2992	2977	2366	2581	2296	2133	2440	-	2088	2194	1913	1827	x	x	x
[illegible]	2980	2886	2910	2364	2539	2337	2133	2440	101	2092	2173	1931	1824	x	x	x
[illegible]	2933	2734	2979	2365	2459	2201	2227	2360	403	2091	2176	1857	1823	x	x	x
2000	2849	2596	2925	2394	2417	2246	2184	2280	805	2101	2076	1846	1592	x	x	x
[illegible]	2848	2312	2822	2328	2391	2286	2176	2260	1318	2089	2059	1650	1630	x	x	x
[illegible]	2876	2424	2743	2331	2325	2275	2159	2400	1721	2095	1979	1712	1635	x	x	x
[illegible]	2926	2515	2696	2392	2324	2328	2188	2440	1785	2080	1938	1721	1516	x	x	2191
[illegible]	2916	2583	2549	2252	2277	2301	2114	2360	1944	2092	1974	1681	1082	x	x	2206
Peak Concentration	-	4000	4000	3600	3160	2960	2520	3720		2840	3200	3320	2680	-	-	-
Max. Hourly Average	-	2992	3003	2698	2679	2457	2306	2480	2320	2119	2247	2113	1910	-	-	-
24 Hour Average	-	2704	2806	2433	2438	2329	2190	2246	-	2049	2124	1906	1728	-	-	-

AIR QUALITY MONTHLY SUMMARY FOR DECEMBER

Stack Sulphur Dioxide (mg/m^3, 3% O_2)

- Plant not running
x Stack gas system down

DATE / TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	2230	1200	x	x	x	x	x	1963	-	-	-	-	-	-	-
0200	2202	1240	x	x	x	x	x	1944	-	-	-	-	-	-	-
0300	2234	1240	x	x	x	x	x	1860	-	-	-	-	-	-	-
0400	2200	1120	x	x	x	1982	x	2076	-	-	-	-	-	-	-
0500	2264	1240	x	x	x	2026	x	1993	-	-	-	-	-	-	-
0600	2223	1280	x	x	x	2101	x	1860	-	-	-	-	-	-	-
0700	2252	1280	x	x	x	2213	x	2012	-	-	-	-	-	-	-
0800	2266	1280	x	x	x	2267	x	2101	-	-	-	-	-	-	-
0900	2400	1320	x	x	x	1996	x	2172	-	-	-	-	-	-	-
1000	2703	1280	x	x	x	2001	x	-	-	-	-	-	-	-	-
1100	45	1240	x	x	x	2030	x	-	-	-	-	-	-	-	-
1200	1490	1280	x	x	x	2182	x	-	-	-	-	-	-	-	-
1300	2159	1320	x	x	x	2119	x	-	-	-	-	-	-	-	-
1400	2309	1280	x	x	x	2583	x	-	-	-	-	-	-	-	-
1500	2287	1320	x	x	x	2231	x	-	-	-	-	-	-	-	-
1600	1859	1280	x	x	x	1989	x	-	-	-	-	-	-	-	-
1700	1698	1520	x	x	x	2104	x	-	-	-	-	-	-	-	-
1800	1712	1480	x	x	x	2064	2199	-	-	-	-	-	-	-	-
1900	1714	1520	x	x	x	x	2023	-	-	-	-	-	-	-	-
2000	1641	1680	x	x	x	x	1933	-	-	-	-	-	-	-	-
2100	1611	1680	x	x	x	x	1899	-	-	-	-	-	-	-	-
2200	1523	1760	x	x	x	x	1946	-	-	-	-	-	-	-	-
2300	1148	1760	x	x	x	x	1997	-	-	-	-	-	-	-	-
2400	1152	1800	x	x	x	x	2016	-	-	-	-	-	-	-	-
Peak Concentration	2760	3360	-	-	-	-	-	-	-	-	-	-	-	-	
Max. Hourly Average	2703	1800	-	-	-	-	-	-	-	-	-	-	-	-	
Ave	18	13	-	-	-	-	-	-	-	-	-	-	-	-	

IN-STACK NO_x DATA

TABLE 2

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-April
Stack Nitrogen Oxides (mg/m^3, 3% O_2)

DATE TIME	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100											-	293	x			
0200											-	311	x			
0300											-	329	x			
0400											-	329	x			
0500											-	348	x			
0600											-	329	x			
0700											-	256	x			
0800											-	311	x			
0900											-	311	x			
1000											-	256	x			
1100	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	-	221	x	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING
1200											-	221	x			
1300											-	x	x			
1400											-	x	x			
1500											-	x	x			
1600											-	x	x			
1700											-	x	x			
1800											-	x	x			
1900											-	x	x			
2000											82	x	x			
2100											85	x	x			
2200											95	x	x			
2300											155	x	-			
2400											256	x	--			
Peak Concentration											274	366	x			
Max. Hourly Average											256	348	x			
24 Hour Average											N/A	x	N/A			

Legend:

- Plant not running

x Stack was not do

TABLE 2

POPLAR RIVER POWER STATION

AIR QUALITY MONTHLY SUMMARY FOR 1981-May

Stack Nitrogen Oxides (mg/m^3, 3% O_2)

DATE															
TIME	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
Hourly Averages															
0100		-	149	606	619	570				-	582				
0200		-	153	607	616	600				-	581				
0300		-	153	605	617	560				-	580				
0400		-	131	592	662	560				-	578				
0500		-	126	560	656	560				-	576				
0600		-	168	656	709	560				-	597				
0700		-	335	680	704	560				-	593				
0800		-	468	630	611	560				-	590				
0900		-	540	587	604	650				-	598				
1000		-	590	580	574	650				-	603				
1100	UNIT NOT OPERATING	-	562	568	571	650	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	-	590	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING
1200		-	544	552	595	650				-	577				
1300		-	552	584	583	620				-	571				
1400		-	552	595	581	620				270	567				
1500		126	542	576	593	670				396	571				
1600		174	506	564	621	650				459	569				
1700		140	509	576	652	-				544	572				
1800		180	497	587	654	-				533	386				
1900		176	488	605	636	-				563	-				
2000		176	493	620	650	-				572	-				
2100		167	576	625	573	-				584	-				
2200		159	619	622	540	-				587	-				
2300		144	602	618	556	-				578	-				
2400		147	604	619	551	-				579	-				
Peak Concentration		221	633	802	838	784				603	615				
Max. Hourly Average		180	619	680	709	670				587	603				
24 Hour Average		N/A	436	580	614	N/A				N/A	N/A				

Percent Downtime = 59%

Legend:

- Plant not running

x Stack gas system down

POPLAR RIVER POWER STATION

AIR QUALITY MONTHLY SUMM/ FOR SEPTEMBER 1981

Stack Nitrogen Oxides (mg/m^3, 3% O_2)

Legend:
- – Plant not running
- x Stack gas system down
- * Burning oil

ercent downtime = 52%

DATE / TIME	100	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages.																	
0100		–	–	–	–	–	–	–	–	–	–	x*	772	x	x	x	x
0200		–	–	–	–	–	–	–	–	–	–	x*	772	x	x	x	x
0300		–	–	–	–	–	–	–	–	–	x*	x*	772	x	x	x	x
0400		–	–	–	–	–	–	–	–	–	x*	x*	772	x	x	x	x
0500		–	–	–	–	–	–	–	–	–	x*	637*	772	x	x	x	x
0600		–	–	–	–	–	–	–	–	–	x*	662*	772	x	x	x	x
0700		–	–	–	–	–	–	–	–	–	x*	625*	772	x	x	x	x
0800		–	–	–	–	–	–	–	–	–	x*	711*	x	x	x	x	x
0900		–	–	–	–	–	–	–	–	–	x*	748	x	x	x	x	x
1000		–	–	–	–	–	–	–	–	–	x*	736	x	x	x	x	x
1100		–	–	–	–	–	–	–	–	–	x*	736	x	x	x	x	x
1200		–	–	–	–	–	–	–	–	–	x*	736	x	x	x	x	x
1300		–	–	–	–	–	–	–	–	–	x*	736	x	x	x	x	x
1400		–	–	–	–	–	–	–	–	–	x*	748	x	x	x	x	x
1500		–	–	–	–	–	–	–	–	–	x*	785	x	x	x	x	x
1600		–	–	–	–	–	–	–	–	–	x*	797	785	x	x	x	x
1700		–	–	–	–	–	–	–	–	–	x*	846	760	x	x	x	x
1800		–	–	–	–	–	–	–	–	–	x*	834	772	x	x	x	x
1900		–	–	–	–	–	–	–	–	–	x*	832	772	x	x	x	x
2000		–	–	–	–	–	–	–	–	–	x*	797	772	x	x	x	x
2100		–	–	–	–	–	–	–	–	–	x*	797	772	x	x	x	x
2200		–	–	–	–	–	–	–	–	–	x*	772	772	x	x	x	x
2300		–	–	–	–	–	–	–	–	–	x*	772	772	x	x	x	x
24		–	–	–	–	–	–	–	–	–	x*	772	772	x	x	x	x
Peak Concentration		–	–	–	–	–	–	–	–	–	–	–	–	x	x	x	x
Mix Hourly Average		–	–	–	–	–	–	–	–	–	–	–	–	x	x	x	x

Stack Nitrogen Oxides (ng/n... 3% O_2)

x Stack gas system down
* Burning oil

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rly Averages															
)	x	968	1042*	956	907	925	49*	539	563.2	502	531.0	520	564.7	569.3	
)	x	993	1054*	956	907	925	49*	539	560.9	502	537.8	520	568.1	567.1	
)	x	1042	1042*	944	907	925	49*	539	556.6	502	538.9	520	567.8	568.3	
)	x	1103	1054*	944	907	925	49*	515	561.7	510	538.2	522	568.6	568.3	
)	x	1157	1042*	932	907	920	49*	515	560.0	510	534.8	522	568.9	563.6	
)	x	1152	1042*	932	912	907	49*	515	554.3	512	523.6	522	571.9	557.9	
)	x	1165	1054*	932	912	925	49*	515	552.3	512	507.1	527	571.7	561.9	
)	x	1189	1054*	919	907	925	49*	515	540.9	510	438.4	527	575.8	566.3	
)	x	1201	1042*	919	912	907	49*	515	542.9	510	515.3	527	573.3	536.7	
)	x	1226	1042*	919	915	907	245*	515	527.1	502	517.9	Cal	189.8	504.9	
)	x	1226	1042*	919	915	907	490*	515	485.9	502	524.9	Cal	280.6	570.1	
)	x	1226	944 *	1226	920	907	368*	515	497.9	510	522.6	Cal	557.8	570.9	
)	x	1226	944*	1226	932	907	380*	539	500.3	510	523.9	Cal	560.3	572.0	
)	x	1226	919*	x	932	907	490	552	502.9	515	526.1	Cal	563.6	576.2	
)															
)	x	981	907*	x	932	907	490	552	504.2	520	525.1	Cal	564.1	566.6	
)	x	993	932*	x	920	907	490	552	504.2	520	529.5	Cal	567.2	569.1	
)	x	1017	956*	858	907	515	503	552	510.2	520	531.0	x	568.1	570.9	
)	x	1029	932*	870	907	515	503	552	510.5	525	534.0	x	569.3	568.7	
)	858	1017	919	882	932	515	515	552	508.7	525	528.4	x	574.8	577.7	
)	858	1042	932	907	932	515	515	552	509.4	530	525.9	x	574.8	576.5	
)	870	x	932	932	932	515	515	552	515.0	539	522.3	552	573.1	569.9	
)	919	x	956	956	932	515	539	552	507.6	539	527.4	552	574.3	570.9	
)	944	x	919	956	932	49*	539	552	496.9	539	531.0	552	569.3	566.8	
)	956	1042*	956	932	925	49*	539	552	496.9	539	531.0	552	569.3	566.8	
x Concentration	x	x	1226	x	1005	1005	540	560	592.4	588	555.6	x	592.4	592.4	
. Hourly Average	x	x	1054	x	932	925	539	552	561.7	539	538.9	x	575.8	577.7	

POPLAR RIVER POWER STATION

AIR QUALITY MONTHLY SUMM FOR OCTOBER 1981

Stack Nitrogen Oxides (mg/m^3, 3% O_2) Oct 1981

Legend:
- Plant not running
x Stack gas system down
M Maintenance on stack system

rent downtime = 22,5%

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
rly Averages.																
00	566.8	522.2	544.6	520.1	528.3	529.5	542.1	531.8	545.8	670.8	692.8	664.8	86.9	437.8	708.6	635.0
00	569.9	530.7	535.8	527.3	531.4	545.2	542.1	537.9	549.6	696.7	696.2	657.8	89.1	487.4	699.9	643.4
00	574.8	531.9	532.8	533.7	526.2	545.1	529.5	531.8	546.7	697.9	704.8	664.1	97.8	369.5	701.4	641.9
00	569.4	539.1	538.3	534.9	533.7	518.9	545.2	526.8	552.6	675.9	704.6	662.3	408.3	432.1	697.6	636.2
00	574.4	541.4	435.3	517.4	539.4	478.4	545.1	531.9	548.8	677.1	709.4	632.9	468.9	422.9	697.4	641.8
00	573.1	537.8	535.9	517.9	534.6	477.4	518.9	535.8	544.2	683.5	703.3	661.2	460.6	396.6	685.6	638.3
00	571.6	540.3	532.6	531.3	532.8	479.9	478.4	538.0	538.5	691.8	698.9	657.9	379.7	459.6	690.8	585.9
00	572.3	543.4	528.3	537.8	528.8	479.5	477.4	547.3	541.6	685.0	708.9	627.5	458.7	482.4	697.3	645.6
00	567.2	546.3	534.8	533.6	521.6	476.4	479.9	554.2	546.3	672.6	700.3	644.4	418.3	494.2	693.9	648.8
00	569.0	549.7	537.1	528.0	526.1	21.4	513.8	550.4	538.2	681.3	705.9	657.0	488.1	262.1	677.8	581.3
1	189.4	430.4	537.3	527.4	337.5	372.8	531.9	549.1	543.7	686.6	704.1	634.1	299.8	54.6	577.8	655.5
1	58.7	207.0	526.6	520.2	345.1	503.8	509.4	546.1	551.6	690.5	706.7	632.2	468.9	273.6	557.3	673.8
1	60.4	499.6	523.9	537.6	529.3	504.8	474.6	546.9	556.1	696.1	703.8	583.4	524.7	711.6	527.9	672.7
1	197.7	515.3	516.0	538.5	535.2	512.0	74.8	553.4	558.4	697.1	713.0	608.7	480.9	313.3	513.8	667.3
00	545.1	517.8	523.2	521.6	530.1	525.1	257.9	557.0	562.9	687.7	702.1	605.5	456.9	313.3	463.9	660.9
1	519.3	512.9	524.7	540.9	527.9	525.1	532.2	552.1	531.0	669.6	705.5	637.4	413.5	348.1	575.8	661.8
00	511.7	517.9	528.0	539.1	530.1	532.6	639.9	555.4	554.5	700.7	708.3	627.8	456.3	123.4	619.0	666.3
00	525.4	518.7	529.2	540.7	541.4	541.9	548.6	547.6	575.3	699.6	705.6	627.8	500.4	442.7	634.6	649.8
00	529.2	524.7	527.1	535.3	549.7	540.1	555.6	554.3	605.2	702.1	700.6	624.4	503.3	528.0	643.8	606.1
00	535.5	527.1	525.9	528.8	554.9	543.1	561.1	550.6	654.4	706.6	703.4	617.9	382.5	565.7	640.3	621.8
00	532.2	531.8	530.8	533.8	551.5	530.7	557.2	554.6	651.4	707.6	678.3	517.7	443.4	685.3	641.0	591.9
00	529.3	536.3	533.8	536.5	545.9	534.3	544.4	556.8	659.6	709.3	669.1	501.9	499.3	697.6	635.8	619.9
00	523.9	533.6	531.0	540.3	542.1	538.8	535.2	551.8	658.8	707.4	666.1	322.7	336.4	692.3	624.3	676.3
	523.9	533.6	531.0	540.3	642.1	538.8	535.2	551.8	658.8	707.4	666.1	322.7	336.4	692.3	624.3	676.3
ncentration	588	576	552	552	551	588	576	588	736	736	736	662	674	760	760	760
Hourly Average	473.3	549.7	544.6	540.6	540.9	554.9	561.1	557.0	659.6	709.3	713.0	664.8	524.7	697.6	708.6	676.3

Hou Aver

Stack Nitrogen Oxides (mg/m^3, 3% O_2)

x Stack gas system do.
M Maintenance, stack sy tem

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Averages															
	677.5	619.8	677.9	652.1	x	x	x	571.7	639.1	686.6	828.5	M	x	x	x
	673.3	637.1	685.3	660.4	x	x	x	575.6	603.8	674.4	844.3	M	x	x	x
	677.2	620.9	695.6	663.6	x	x	x	567.4	584.6	675.6	834.9	M	x	x	x
	664.9	638.0	694.1	660.0	x	x	x	576.3	178.8	670.9	814.4	M	x	x	x
	664.1	616.8	697.4	655.2	x	x	x	577.1	28.3	679.8	795.8	M	x	x	x
	661.6	583.9	698.6	660.1	x	x	x	562.4	33.7	683.3	806.2	M	x	x	x
700	662.8	586.8	694.3	660.8	x	x	x	571.3	37.3	690.5	803.2	M	x	x	x
800	660.9	474.4	691.9	636.6	x	x	x	553.9	38.0	693.9	794.1	M	x	x	x
	659.6	559.0	687.5	644.0	x	x	x	568.4	38.0	649.5	617.6	M	x	x	x
	658.8	603.4	630.7	618.7	x	x	x	559.9	38.9	570.8	596.6	M	x	x	x
	657.0	632.8	688.8	639.2	x	x	x	516.2	56.5	604.2	580.1	M	x	x	x
	657.3	640.8	662.1	658.2	x	x	x	576.8	377.9	783.2	585.4	M	x	x	x
	657.6	651.6	604.8	638.1	x	x	x	585.4	x	818.9	583.7	M	x	x	x
400	633.6	661.2	588.9	656.4	x	x	44.30	584.1	x	823.3	597.0	M	x	x	x
	561.7	658.6	588.6	554.9	x	x	417.9	567.9	x	825.2	569.8	M	x	x	x
	593.3	661.9	581.6	394.5	x	x	471.3	568.4	550.1	830.4	563.3	M	x	x	x
700	597.1	659.4	644.4	278.4	x	x	578.6	582.2	675.5	836.6	M	M	x	x	x
800	598.3	663.0	653.1	292.0	x	x	582.6	577.1	686.6	841.7	M	M	x	x	x
900	591.4	672.1	651.8	255.3	x	x	561.7	579.2	666.0	828.7	M	M	x	x	x
2000	636.2	672.4	657.8	206.5	x	x	575.9	576.6	694.4	836.6	M	M	x	x	x
2100	645.3	670.5	656.7	278.8	x	x	578.8	587.1	694.6	841.5	M	M	x	x	x
2200	640.7	672.7	668.5	321.8	x	x	580.7	585.9	699.4	847.5	M	M	x	x	x
2300	640.3	684.4	659.4	314.1	x	x	568.9	589.2	699.2	844.3	M	M	x	x	x
2400	640.3	684.4	659.4	314.1	x	x	568.9	589.2	699.2	844.3	M	M	x	x	x
Peak Concentration	686	686	723	711	–	–	–	748	–	968	–	–	–	–	–
Max. Hourly Average	677.2	684.4	698.6	663.6	–	–	–	589.2	–	844.3	–	–	–	–	–
24 Hour Average	642.1	634.4	630.5	517.6	–	–	–	572.9	–	727.3					

TABLE 2.

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR
Stack Nitrogen Oxides (mg/m^3, 3% O_2)
(expressed as NO_2) for November

Legend:
- – Plant not running
- x Stack gas system down

Percent downtime = 13.9 %

DATE / TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages.																
0100	x	x	924	923	907	870	596	-	87	785	817	862	x	-	-	-
0200	x	x	905	909	896	860	-	-	79	790	812	862	x	-	-	-
0300	x	x	908	906	897	861	-	-	96	796	803	870	x	-	-	-
0400	x	x	907	910	897	862	-	-	134	790	813	871	x	-	-	-
0500	x	x	898	903	892	855	-	-	91	773	815	861	x	-	-	-
0600	x	x	895	899	900	855	-	-	89	792	814	854	x	-	-	-
0700	x	x	903	905	894	852	-	-	342	784	809	853	x	-	-	-
0800	x	x	897	910	893	848	-	-	801	785	813	851	x	-	-	-
0900	x	x	907	923	877	857	-	-	878	788	815	861	x	-	-	-
1000	x	x	530	912	815	869	-	-	904	799	831	732	x	-	-	-
1100	x	x	208	897	940	891	-	-	923	811	846	858	888	-	-	-
1200	x	x	154	928	949	952	-	-	691	831	867	901	903	-	-	-
1300	x	x	481	964	927	961	-	-	777	850	890	917	910	-	-	-
1400	x	x	703	966	920	974	-	-	690	854	904	930	908	-	-	-
1500	x	x	769	749	933	976	-	-	676	844	883	942	-	-	-	-
1600	x	x	761	900	895	918	-	634	732	796	858	891	-	-	-	-
1700	x	932	800	899	879	968	-	67	783	825	902	935	-	-	-	-
1800	x	925	895	913	866	959	-	68	791	842	881	917	-	-	-	-
1900	x	928	909	912	885	954	-	84	795	827	861	909	-	-	-	-
2000	x	922	915	890	876	951	-	90	790	821	862	908	-	-	-	-
2100	x	924	918	890	886	955	-	81	784	821	864	906	-	-	-	-
2200	x	915	903	892	803	949	-	90	780	820	857	918	-	-	-	-
2300	x	914	910	891	882	943	-	92	790	822	854	902	-	-	-	-
2400	x	914	910	891	882	943	-	92	790	822	854	902	-	-	-	-
Peak Concentration	-	-	940	980	974	1000	-	-	825	879	925	962	-	-	-	-
Max. Hourly Average	-	-	924	966	949	976	-	-	795	854	904	942	-	-	-	-

AIR QUALITY MONTHLY SUMMARY FOR
Stack Nitrogen Oxides (mg/m^3, 3% O_2)
(expressed as NO_2) for November

- Plant not running
x Stack gas system down

DATE / TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	-	-	-	-	-	-	-	-	-	-	711	693	678	807	
0200	-	-	-	-	-	-	-	-	-	-	709	685	659	809	
0300	-	-	-	-	-	-	-	-	-	-	268	690	674	804	
0400	-	-	-	-	-	-	-	-	-	-	127	704	679	790	
0500	-	-	-	-	-	-	-	-	-	-	247	704	692	775	
0600	-	-	-	-	-	-	-	-	-	-	541	732	651	753	
0700	-	-	-	-	-	-	-	-	-	-	495	749	674	706	
0800	-	-	-	-	-	-	-	-	-	-	580	753	670	693	
0900	-	-	-	-	-	-	-	-	-	-	642	751	672	690	
1000	-	-	-	-	-	-	-	-	-	-	626	767	261	694	
1100	-	-	-	-	-	-	-	-	-	-	654	772	185	701	
1200	-	-	-	-	-	-	-	-	-	-	715	752	213	605	
1300	-	-	-	-	-	-	-	-	-	-	695	761	177	684	
1400	-	-	-	-	-	-	-	-	-	-	730	745	202	742	
1500	-	-	-	-	-	-	-	-	-	-	733	739	163	800	
1600	-	-	-	-	-	-	-	-	-	-	669	736	165	800	
1700	-	-	-	-	-	-	-	-	-	-	635	693	505	790	
1800	-	-	-	-	-	-	-	-	-	-	723	682	665	784	
1900	-	-	-	-	-	-	-	-	-	-	682	712	690	781	
2000	-	-	-	-	-	-	-	-	-	-	-717	714	687	777	
2100	-	-	-	-	-	-	-	-	-	-	744	698	701	709	
2200	-	-	-	-	-	-	-	-	-	-	673	704	743	689	
2300	-	-	-	-	-	-	-	-	-	-	696	643	758	730	
2400	-	-	-	-	-	-	-	-	-	-	690	672	779	775	
Peak Concentration	-	-	-	-	-	-	-	-	-	-	760	800	810	825	
Max. Hourly Average	-	-	-	-	-	-	-	-	-	-	744	772	779	809	
24 Hour Average	-	-	-	-	-	-	-	-	-	-	612	694	539	745	

Cent downtime = 33%

AIR QUALITY MONTHLY SUMMARY ...ECEMBER

Stack Nitrogen Oxides (mg/m^3, 3% O_2) expressed as NO_2

Legend:
- Plant not running
x Stack gas system down
C computer problems

MST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages.																
00	781	749	714	647	656	764	705	705	604	820	788	712	629	x	x	x
100	782	751	726	638	670	767	699	717	660	820	787	717	578	x	x	x
200	779	740	726	635	643	772	702	704	680	813	790	712	650	x	x	x
300	762	725	727	630	643	775	702	708	680	812	780	705	623	x	x	x
400	749	725	734	635	676	768	699	712	680	811	777	703	677	x	x	x
	755	731	736	631	690	762	708	707	700	817	770	701	711	x	x	x
	746	718	739	640	690	762	687	707	700	814	769	711	726	x	x	x
00	760	717	735	633	685	757	669	707	680	816	771	693	743	x	x	x
00	C	707	667	649	681	764	657	698	660	814	766	665	724	x	x	x
00	751	702	653	643	689	770	495	691	647	816	767	672	693	x	x	x
00	762	727	655	675	702	762	668	661	591	811	763	711	701	x	x	x
00	784	632	675	685	715	763	686	674	219	823	706	601	732	x	x	x
00	804	576	669	705	697	754	691	690	-	869	781	639	742	x	x	x
00	812	674	667	706	705	748	700	680	-	894	783	607	737	x	x	x
00	814	798	662	713	716	744	705	700	-	887	779	687	736	x	x	x
00	800	797	664	660	675	697	676	700	-	840	731	590	696	x	x	x
00	793	808	685	692	714	723	698	690	-	869	757	591	722	x	x	x
00	814	809	666	677	712	724	701	700	176	852	754	686	712	x	x	x
00	820	801	660	670	716	706	707	660	187	851	745	681	711	x	x	x
00	809	792	655	659	718	717	705	620	381	807	693	632	767	x	x	x
00	805	732	658	666	709	717	705	620	611	812	706	601	754	x	x	x
00	800	748	622	646	734	716	697	640	730	809	713	615	762	x	x	707
00	781	730	642	644	742	716	695	620	747	804	703	631	778	x	x	741
00	755	724	638	628	754	719	683	620	814	798	701	602	575	x	x	749
..: Concentration	-	820	800	720	800	800	720	700		900	800	740	1020			
x. Hourly Average	-	809	739	713	754	775	707	717		894	790	717	778			

Stack Nitrogen Oxides (mg/m^3, 3% O_2) expressed as NO_2

x Stack gas system down

DE ES	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rly Averages															
00	741	600	x	x	x	x	x	893	-	-	-	-	-	-	-
00	746	600	x	x	x	x	x	966	-	-	-	-	-	-	-
00	747	600	x	x	x	x	x	805	-	-	-	-	-	-	-
00	763	560	x	x	x	607	x	915	-	-	-	-	-	-	-
00	781	560	x	x	x	618	x	892	-	-	-	-	-	-	-
00	795	520	x	x	x	614	x	894	-	-	-	-	-	-	-
00	805	520	x	x	x	616	x	911	-	-	-	-	-	-	-
00	816	520	x	x	x	607	x	907	-	-	-	-	-	-	-
00	806	520	x	x	x	606	x	802	-	-	-	-	-	-	-
00	795	520	x	x	x	594	x	-	-	-	-	-	-	-	-
00	78	540	x	x	x	575	x	-	-	-	-	-	-	-	-
00	685	540	x	x	x	559	x	-	-	-	-	-	-	-	-
00	675	500	x	x	x	568	x	-	-	-	-	-	-	-	-
00	688	500	x	x	x	490	x	-	-	-	-	-	-	-	-
00	713	500	x	x	x	610	x	-	-	-	-	-	-	-	-
00	507	480	x	x	x	597	x	-	-	-	-	-	-	-	-
00	660	480	x	x	x	631	x	-	-	-	-	-	-	-	-
00	647	520	x	x	x	618	950	-	-	-	-	-	-	-	-
00	629	480	x	x	x	x	950	-	-	-	-	-	-	-	-
00	643	460	x	x	x	x	930	-	-	-	-	-	-	-	-
00	629	500	x	x	x	x	917	-	-	-	-	-	-	-	-
00	621	540	x	x	x	x	890	-	-	-	-	-	-	-	-
00	573	560	x	x	x	x	886	-	-	-	-	-	-	-	-
00	591	560	x	x	x	x	899	-	-	-	-	-	-	-	-
... Concentration	820	760	-	-	-	-	-	-	-	-	-	-	-	-	-
... Hourly Average	816	600	-	-	-	-	-	-	-	-	-	-	-	-	-

IN-STACK OPACITY DATA

TABLE 3

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-April
Stack Opacity (%)

DATE TIME	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100											-	84	64			
0200											-	85	57			
0300											-	84	55			
0400											-	84	57			
0500											-	84	54			
0600											-	83	45			
0700											-	84	52			
0800											-	86	55			
0900											-	85	60			
1000											-	85	74			
1100	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	-	81	85	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING
1200											-	79	84			
1300											-	78	82			
1400											-	78	80			
1500											-	77	68			
1600											-	75	65			
1700											-	61	63			
1800											-	54	65			
1900											-	57	67			
2000											60	59	75			
2100											39	60	77			
2200											44	62	70			
2300											75	63	-			
2400											86	63	-			
Peak Concentration											87	86	85			
Max. Hourly Average											86	86	85			
24 Hour Average											N/A	75	N/A			

Legend:
- Plant not running
x Stack gas system down

TABLE 3 CONTINUED

DATE	17	18	19	20	21	22	23	24	25	26	27	28	29	30
TIME														
Hourly Averages														
0100										-				38
0200										-				40
0300										-				45
0400										-				50
0500										-				37
0600										-				38
0700										-				53
0800										-				57
0900										-				70
1000										-				72
1100	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	-	UNIT NOT OPERATING	UNIT NOT OPERATING	UNIT NOT OPERATING	58
1200										-				58
1300										-				59
1400										-				45
1500										-				
1600										35				
1700										40				
1800										-				
1900										-				
2000										-				
2100										-				
2200										-				
2300										-				
2400										-				
Peak Concentration										85				
Max. Hourly Average										40				
24 Hour Average										N/A				

Remainder of data on next roll

PerCent Downtime = 0%

Legend:

- Plant not running

x Stack gas system down

TABLE 3

POPLAR RIVER POWER STATION

AIR QUALITY MONTHLY SUMMARY FOR 1981-May

Stack Opacity (%)

DATE TIME	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100	42		-	55	62	80	63	75	62	60						
0200	40		-	56	58	75	65	70	65	55						
0300	38		-	55	56	76	70	70	62	58						
0400	40		-	55	53	80	68	68	62	57						
0500	38		-	48	55	72	68	67	61	55						
0600	39		-	46	53	73	63	70	64	60						
0700	39		-	48	50	72	62	65	63	55						
0800	37		-	43	56	74	65	66	60	56						
0900	38		-	46	62	75	63	64	60	56						
1000	37		-	48	58	74	58	66	55	54						
1100	38		-	48	55	75	-	66	52	55						
1200	38		-	50	58	70	-	64	60	63						
1300	50		-	45	62	73	-	65	65	67						
1400	-		-	48	65	74	-	65	63	62						
1500	42 -		35	55	68	70	-	62	62	60						
1600	44 -		38	65	63	65	-	65	62	62						
1700	65 -		44	67	70	68	-	67	60	62						
1800	62 -		75	62	70	66	55	68	62	65						
1900	63 -		45	65	50	68	35	65	65	70						
2000	60 -		50	64	60	66	55	70	62	75						
2100	55 -		52	68	70	68	80	72	65	75						
2200	48 -		49	68	65	68	82	70	67	75						
2300	45 -		54	65	69	70	78	68	63	83						
2400	45 -		50	65	76	66	75	67	64	-						
Peak Concentration	84		86	86	85	86	87	86	86	86						
Max. Hourly Average	50		75	68	76	80	82	75	67	83						
24 Hour Average	N/A		N/A	56	61	72	N/A	67	62	N/A						

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

Legend:

- Plant not running

x Stack gas system down

Table 3 Continued

DATE															
TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100		-	58	80	71	66				-	80				
0200		-	59	80	71	70				-	80				
0300		-	56	81	70	75				-	80				
0400		-	45	80	77	75				-	79				
0500		-	51	78	78	75				-	80				
0600		-	58	76	77	74				-	79				
0700		-	68	74	76	73				-	80				
0800		-	73	78	75	73				-	81				
0900		-	64	80	71	70				-	80				
1000		-	69	81	68	66				-	82				
1100		-	66	78	67	66				-	83				
1200		-	67	76	68	65				-	83				
1300		-	58	75	64	70				-	83				
1400		-	59	72	65	75				83	82				
1500		80	66	70	62	70				83	81				
1600		78	71	70	70	75				83	80				
1700		73	71	68	74	-				83	80				
1800		56	74	69	72	-				83	81				
1900		55	73	69	73	-				83	-				
2000		64	71	69	76	-				81	-				
2100		64	77	71	77	-				80	-				
2200		63	77	66	67	-				76	-				
2300		62	82	70	65	-				79	-				
2400		50	81	71	68	-				79	-				
Peak Concentration		89	85	85	85	85				88	86				
Max. Hourly Average		80	82	81	78	75				83	83				
24 Hour Average		N/A	66	74	71	N/A				N/A	N/A				

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

Percent Downtime = 0%

Legend:

- Plant not running

x Stack gas system down

TAI AIR POR RIVE ER S ION JULY

Downtime = 3%

Leger
– Plant not running
x Stack gas system down

DAT
TIME

Stack Opacity (%)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages.																
0100	63	58	86	–	–	–	–	–	–	–	–	84	74	82	80	86
0200	63	59	86	–	–	–	–	–	–	–	–	82	73	72	–	86
0300	63	58	85	–	–	–	–	–	–	–	–	81	73	80	–	86
0400	62	56	85	–	–	–	–	–	–	–	–	80	73	79	–	86
0500	61	62	83	–	–	–	–	–	–	–	–	79	74	75	–	86
0600	60	75	82	–	–	–	–	–	–	–	–	79	85	75	–	86
0700	59	86	80	–	–	–	–	–	–	–	–	78	85	75	–	86
0800	59	75	78	–	–	–	–	–	–	–	–	76	85	75	–	86
0900	59	62	76	–	–	–	–	–	–	–	–	76	85	78	–	85
1000	60	58	75	–	–	–	–	–	–	–	–	76	85	78	NA	84
1100	61	56	72	–	–	–	–	–	–	–	–	80	85	82	NA	84
1200	64	60	72	–	–	–	–	–	–	–	–	74	85	82	NA	84
1300	61	70	70	–	–	–	–	–	–	–	–	74	84	83	NA	84
1400	58	78	65	–	–	–	–	–	–	–	–	75	84	83	NA	84
1500	57	78	62	–	–	–	–	–	–	–	86	76	84	83	NA	85
1600	58	–	60	–	–	–	–	–	–	–	85	76	84	82	NA	85
1700	58	–	59	–	–	–	–	–	–	–	85	76	84	84	86	85
1800	58	–	58	–	–	–	–	–	–	–	83	76	85	83	86	80
1900	57	–	58	–	–	–	–	–	–	–	83	76	85	83	86	80
2000	57	–	60	–	–	–	–	–	–	–	82	76	85	83	86	79
2100	58	–	–	–	–	–	–	–	–	–	84	76	85	82	86	78
2200	58	–	–	–	–	–	–	–	–	–	84	76	85	82	86	78
2300	62	–	–	–	–	–	–	–	–	–	84	76	85	81	86	78
2400	60	–	–	–	–	–	–	–	–	–	84	75	85	81	86	84
Peak Concentration																
Max. Hourly Average	64	86	–	–	–	–	–	–	–	–	86	84	85	84	87	86

AIR QUALITY MONTHLY SU Y FOR JULY 1981

Legend:
– Plant not running
x Stack gas system down

Stack Opacity (%)

DATE / TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	86	86	64	54	74	–	67	84	78	67	–	68	62	60	
0200	86	86	64	54	73	–	66	83	78	86	83	66	68	61	
0300	86	86	66	52	72	–	65	81	78	–	89	66	65	62	
0400	86	86	62	54	70	–	65	80	79	–	88	65	64	63	
0500	86	86	62	54	71	–	64	79	78	–	85	64	64	64	
0600	86	86	60	54	70	–	65	78	77	–	80	64	65	64	
0700	86	86	60	65	68	–	65	77	78	–	85	63	64	65	
0800	86	86	60	54	67	–	64	76	79	–	86	64	64	64	
0900	86	86	58	56	–	83	65	75	79	–	86	62	64	62	
1000	86	86	58	57	–	85	66	75	80	–	83	65	65	NA	
1100	86	86	56	52	–	85	66	77	81	–	85	63	64	NA	
1200	86	86	60	53	85	85	70	75	77	–	77	63	63	NA	
1300	86	86	58	–	85	85	67	77	82	–	75	63	61	NA	
1400	86	86	58	–	77	83	67	76	78	–	77	64	70	NA	
1500	86	86	58	–	74	82	66	76	76	–	72	63	61	NA	
1600	86	86	58	–	75	83	67	75	74	–	71	64	58	NA	
1700	86	86	58	85	74	85	68	74	72	–	70	65	61		
1800	86	86	58	83	73	82	70	73	71	–	68	65	60		
1900	86	86	58	82	74	77	79	73	70	–	68	65	60		
2000	86	86	56	81	72	75	87	73	69	–	65	65	59		
2100	86	85	55	79	72	77	84	70	68	–	70	64	59		
2200	86	64	54	79	–	76	85	75	68	–	68	63	65		
2300	86	62	54	77	–	72	84	75	68	–	65	68	62		
2400	86	62	54	75	–	68	83	75	68	–	69	64	60		
Peak Concentration	87	86	86	86	86	88	88	86	87	87	89	86	85	86	
Max Hourly Average	86	86	66	85	85	85	87	84	82	86	89	68	70	65	

REMAINDER OF READINGS ON NEXT ROLL

Downtime = 0%

Stack Opacity (%)

x Stack gas system down

DATE	07-31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TIME																	
Hourly Averages																	
0100	65	70	-														
0200	65	75	-														
0300	65	75	-														
0400	62	78	-														
0500	62	78	-														
0600	62	80	-														
0700	62	80	-														
0800	62	80	-														
0900	62	75	-														
1000	62	65	-														
1100	61	65	-														
1200	61	62	-														
1300	60	65	-	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running	Plant not running
1400	60	65	-														
1500	70	63	-														
1600	82	62	-														
1700	70	61	-														
1800	61	61	-														
1900	63	-	-														
2000	65	-	-														
2100	65	-	-														
2200	65	-	-														
2300	65	-	-														
2400	65	-	-														
Peak Concentration		-	-														
Max. Hourly Average		-	-														

...untime = 0%

AIR QUALITY MONTHLY SUMM... FOR SEPTEMBER 1981

Stack Opacity (%)

Legend:
- = Plant not running
x Stack gas system down
* Burning oil

...ages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
01	-	-	-	-	-	-	-	-	-	-	75*	43	40	35	37	35
02	-	-	-	-	-	-	-	-	-	-	80*	43	40	35	37	37
03	-	-	-	-	-	-	-	-	-	-	78*	43	39	35	37	38
X	-	-	-	-	-	-	-	-	-	20*	78*	43	40	34	42	38
0	-	-	-	-	-	-	-	-	-	60*	78*	43	40	33	NA	45
X	-	-	-	-	-	-	-	-	-	75*	78*	43	39	32	NA	47
0	-	-	-	-	-	-	-	-	-	80*	78*	41	38	32	NA	47
X	-	-	-	-	-	-	-	-	-	20*	70*	40	38	40	NA	36
X	-	-	-	-	-	-	-	-	-	70*	50	39	38	40	NA	38
1	-	-	-	-	-	-	-	-	-	60*	48	38	37	33	35	34
1	-	-	-	-	-	-	-	-	-	80*	45	36	37	33	34	35
1	-	-	-	-	-	-	-	-	-	80*	55	36	38	34	34	29
1	-	-	-	-	-	-	-	-	-	80*	55	38	39	33	31	30
1	-	-	-	-	-	-	-	-	-	80*	45	40	37	33	32	31
1	-	-	-	-	-	-	-	-	-	60*	50	40	36	33	32	30
1	-	-	-	-	-	-	-	-	-	55*	55	40	38	34	32	32
1	-	-	-	-	-	-	-	-	-	50*	48	39	32	32	33	31
1	-	-	-	-	-	-	-	-	-	10*	45	39	29	33	34	30
1	-	-	-	-	-	-	-	-	-	20*	46	41	29	31	34	31
1	-	-	-	-	-	-	-	-	-	60*	46	43	31	32	34	30
1	-	-	-	-	-	-	-	-	-	65*	48	43	31	33	35	NA
1	-	-	-	-	-	-	-	-	-	60*	48	45	35	33	36	NA
1	-	-	-	-	-	-	-	-	-	55*	44	47	35	32	35	34
1	-	-	-	-	-	-	-	-	-	60*	44	44	35	37	36	33
tration	-	-	-	-	-	-	-	-	-	-	80	59	64	76	-	-
Average	-	-	-	-	-	-	-	-	-	-	80	47	40	40	-	-

Stack Opacity (%)

x Stack gas system down

ATE / TME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
ourly Averages															
100	30	29	100*	38.16	27	40	90*	45	39.30	45	27.45	25	27.77	34.44	
200	36	33	100*	35.91	27	45	85*	43	35.62	41	30.31	26	28.25	35.48	
300	38	34	100*	34.48	28	42	95*	41	41.31	40	27.19	27	30.47	33.42	
400	38	35	100*	34.94	29	70	60*	39	42.1	41	30.88	30	30.64	30.32	
500	36	36	100*	36.59	33	30	50*	40	39.2	39	30.34	30	28.25	29.79	
600	32	36	100*	31.36	30	24	99*	41	44.4	38	28.34	27	30.48	28.95	
700	32	34	100*	30.45	30	25	99*	41	43.5	37	25.13	29	31.48	28.58	
800	30	32	100*	28.37	29	27	95*	40	43.7	38	18.71	32	27.54	30.14	
900	30	29	100*	24.24	27	22	95*	23	35.7	37	26.17	31	30.82	28.89	
000	28	28	100*	26.30	24	22	100*	22	31.5	36	29.12	29	28.52	23.39	
100	27	27	100*	25.55	24	23	95*	21	41.2	35	29.02	35	29.91	27.61	
200	27	30	100*	24.23	24	23	100*	23	39.5	35	32.02	30	32.83	27.30	
300	26	31	100*	29.84	24	22	95*	35	34.1	36	29.84	30	33.01	23.76	
400	x	35	100*	22.05	23	21	45	65	33.1	38	33.74	28	34.55	24.02	
500	x	32	100*	26.89	23	21	40	46	34.2	38	31.13	34	34.53	23.68	
600	25	29	100*	22.74	23	21	38	46	38.8	37	29.20	30	35.18	20.75	
700	25	28	100*	28.87	24	22	36	46	32.8	36	31.43	30	37.11	20.92	
800	25	29	100*	23.51	23	21	36	47	22.6	32	27.15	31	35.87	20.84	
900	26	29	28	24.40	22	21	37	50	25.1	35	27.71	35	35.35	17.41	
000	28	30	37	27.33	45	22	36	52	38.6	45	26.23	37	31.74	18.02	
100	28	29	38	26.02	30	23	30	40	30.0	50	26.78	30	33.20	19.36	
200	31	30	37	30.26	37	70	35	38	34.7	39	30.03	25	31.31	19.39	
300	35	30	37	20.66	36	100*	35	40	33.1	35	26.56	25	30.64	20.51	
400	36	100*	37	20.66	36	100*	40	40	33.1	27	26.56	27	30.14	20.51	
eak Concentration	71	100	100	61	100	100	100	100	83	100	52	58	52	60	
ax. Hourly Average	-	100	100	38.16	60	100	99	52	44.4	50	33.74	37	37.11	35.48	
Hour Average	-	34	84	46.31	30	36	61.5	39	38.2	38	30.41	30	31.55	28.93	

Plant Downtime = 1.5%

ALR QUALITY MONTHLY SUMMARY FOR

Stack Opacity (%) For October 1981

- Plant not running
x Stack gas system down

Hourly Averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0100	21.96	21.30	28.56	28.38	27.84	31.40	26.15	10.20	15.09	48.74	40.43	36.45	99.50	19.53	18.91	29.71
0200	21.00	29.40	28.45	27.17	29.66	29.66	26.15	10.34	19.07	44.19	41.95	40.45	100.52	21.39	19.32	27.03
0300	20.77	31.48	28.34	26.95	28.06	25.04	31.40	8.58	20.15	43.20	42.56	38.09	100.52	18.49	21.57	28.53
0400	20.18	25.18	25.83	29.63	27.48	29.56	24.82	10.09	18.40	32.97	40.05	39.61	100.52	25.93	19.59	30.30
0500	19.49	26.37	28.17	20.38	30.14	17.92	25.04	13.74	20.20	41.63	39.71	38.95	58.23	23.80	18.27	30.86
0600	19.14	26.47	28.21	25.50	27.75	18.99	29.56	12.48	17.45	43.55	40.30	40.30	39.23	21.66	18.45	30.30
0700	16.91	25.32	27.98	27.80	29.13	18.01	17.92	13.61	15.63	41.73	43.51	39.95	33.57	23.77	18.45	31.55
0800	21.88	24.30	28.56	26.82	26.82	19.83	18.99	21.53	15.65	42.62	46.24	39.26	35.22	26.13	20.53	30.57
0900	22.90	26.41	26.20	28.20	22.41	20.68	18.01	15.58	17.38	46.64	47.01	41.34	27.59	28.08	18.03	32.55
1000	23.87	35.67	28.30	28.64	25.05	11.77	19.81	14.17	15.21	45.64	45.27	41.30	29.99	18.45	16.34	30.88
1100	72.90	27.91	27.47	27.66	25.63	21.00	18.63	15.54	16.51	45.16	45.53	41.62	21.02	26.58	16.34	38.24
1200	100.54	19.71	30.95	25.24	26.41	18.86	22.44	14.13	23.34	47.91	42.42	42.89	28.30	29.65	18.57	37.04
1300	100.54	28.04	32.42	27.80	29.87	19.25	30.49	18.42	23.80	48.83	49.89	36.96	26.15	31.07	19.94	42.16
1400	100.52	29.95	27.50	28.69	26.02	19.45	100.52	16.26	40.78	47.13	52.13	40.65	25.73	31.60	16.34	49.09
1500	88.35	34.09	30.45	21.52	25.85	17.09	100.54	17.82	28.00	50.63	52.41	40.08	24.13	31.60	19.16	42.66
1600	41.19	29.84	27.25	31.97	20.72	18.88	45.48	16.90	21.53	51.00	50.55	41.05	22.66	66.45	22.72	49.95
1700	34.88	28.95	27.49	31.69	24.56	17.84	26.60	13.89	20.16	52.02	48.62	36.13	27.09	100.61	23.26	40.10
1800	35.02	26.28	28.63	29.13	26.41	18.47	22.98	12.96	20.72	50.30	48.65	35.57	29.30	100.61	23.68	42.82
1900	30.61	26.93	27.33	30.80	25.48	18.16	21.38	13.34	31.95	51.56	50.15	36.07	24.48	100.61	22.27	33.91
2000	25.66	25.72	28.47	24.27	27.47	16.27	23.02	12.54	25.76	49.66	49.09	38.95	23.45	88.80	24.13	34.63
2100	29.56	26.52	28.36	31.60	25.83	18.66	16.34	19.46	32.33	47.98	38.55	36.50	29.20	27.77	24.96	41.56
2200	27.50	29.81	27.41	31.42	28.59	18.07	11.66	18.51	26.98	44.55	33.95	24.27	24.24	31.34	24.00	37.55
2300	33.14	28.25	28.23	29.56	26.15	19.29	7.45	19.03	23.30	45.58	35.29	64.28	18.71	24.55	26.30	39.13
2400	33.14	28.25	28.23	29.56	26.15	19.29	7.45	19.03	23.30	45.58	35.29	64.28	18.71	24.55	26.30	39.13
Max Concentration	100.54	100	100	100	100	100	100.54	100	100	100	100	100	100.52	100.61	100	100
Max Hourly Average	100.54	35.67	32.42	31.97	30.14	31.40	100.54	21.53	40.78	52.02	52.41	64.28	100.57	100.61	26.30	49.95

Stack Opacity (%)

x Stack gas system down

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
[illegible]	39.63	40.64	50.02	37.02	25.26	42.95	46.50	50.11	51.22	58.09	44.94	42.84	43.42	x	72.[illegible]3
[illegible]	44.38	41.77	51.32	35.63	26.21	50.61	46.74	51.83	50.39	58.16	47.74	24.68	43.42	x	68.[illegible]1
[illegible]	43.36	42.56	47.90	38.82	29.10	48.30	50.21	53.65	52.52	56.86	46.00	21.81	41.08	x	70.[illegible]1
[illegible]	47.07	37.27	50.59	35.26	29.52	41.30	46.16	54.12	50.02	57.95	46.55	21.79	41.08	x	70.[illegible]3
[illegible]	47.16	37.68	49.44	41.76	26.93	45.13	44.08	52.78	55.16	55.66	50.59	22.05	39.43	x	68.[illegible]5
[illegible]	46.40	39.52	49.46	39.27	28.97	46.63	46.08	52.93	49.76	64.39	47.67	20.88	40.86	x	70.27
[illegible]	46.12	31.70	50.39	34.98	25.99	52.09	45.20	54.93	49.96	60.09	48.17	20.88	39.48	x	70.94
[illegible]	37.63	37.55	49.57	43.13	27.02	46.31	49.59	28.28	54.93	60.46	45.86	21.23	41.28	x	70.33
[illegible]	40.78	42.60	53.56	37.54	28.81	44.14	43.38	51.09	49.33	70.31	45.62	21.23	40.66	x	70.84
[illegible]	39.33	40.11	49.46	42.[illegible]	26.54	30.51	54.30	51.21	53.25	55.42	[illegible]	[illegible]	[illegible]	x	65.70
[illegible]	41.15	48.59	47.63	40.88	26.39	37.04	48.60	50.16	47.95	51.49	[illegible]	[illegible]	43.[illegible]	x	68.97
[illegible]	43.20	47.55	78.75	43.83	33.95	39.09	37.22	53.45	48.55	48.88	48.15	19.90	42.37	69.99	71.35
[illegible]	38.76	49.09	61.00	48.28	37.94	36.77	35.91	51.91	55.27	48.38	46.30	21.07	44.55	74.63	68.03
[illegible]	43.80	46.85	47.77	44.75	31.43	22.77	36.85	55.54	52.97	50.78	46.24	19.49	42.88		67.08
[illegible]	42.62	46.94	37.13	48.34	28.34	21.41	57.12	52.91	52.93	48.98	45.64	19.58	43.27	40.67	63.69
[illegible]	39.97	46.74	38.83	29.95	42.09	37.63	56.03	51.38	53.48	52.09	42.84	19.21	43.27	63.89	63.59
[illegible]	47.96	49.91	37.16	25.55	40.55	40.67	48.34	53.09	54.25	46.01	24.88	18.55	43.34	81.55	60.95
[illegible]	43.81	51.15	35.67	27.45	41.47	43.52	53.08	53.38	57.20	47.07	21.81	20.41	44.96	81.01	64.54
[illegible]	47.17	45.46	39.84	23.20	43.07	40.78	50.04	53.03	54.30	48.57	21.79	25.37	61.01	80.16	60.13
[illegible]	44.47	49.63	39.98	22.67	40.73	41.53	51.48	51.44	56.10	46.48	22.05	23.67	87.73	80.38	57.66
[illegible]	36.88	50.74	38.70	24.66	51.54	40.86	51.50	50.91	54.40	46.44	20.88	43.42	87.52	78.84	62.15
[illegible]	41.55	49.63	41.55	27.52	46.16	41.56	51.89	53.60	54.81	43.59	20.88	43.42	86.66	77.88	58.70
[illegible]	37.91	51.54	38.67	32.16	46.20	41.45	55.90	51.00	57.14	46.08	21.23	41.08	70.68	78.04	57.34
[illegible]	37.91	51.54	38.67	32.16	46.20	41.45	55.90	51.00	57.14	46.08	21.23	41.08	70.68	78.04	57.34
[illegible] Concentration	100	100	100	100	100	100	100	100	100	100	100	100	100	–	100
[illegible] Hourly Average	47.96	51.54	78.75	48.34	51.54	52.09	56.08	55.54	57.20	70.31	67.23	43.42	87.73	–	72.98
[illegible] Average	42.46	44.87	46.80	35.70	34.89	40.85	48.44	52.16	53.04	52.84	39.94	23.73	51.07	–	66.67

TABLE 3

Percent Downtime = 0%

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR
Stack Opacity (%)
for November

Legend:
- Plant not running
x Stack gas system down

DATE TIME 120	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages																
0100	59.48	57.49	57.98	59.30	59.12	66.81		-	85.41	68.52	53.09	49.26	57.68	-	-	-
0200	58.83	57.21	59.62	55.88	60.48	68.07	-	-	84.39	68.53	54.73	48.31	55.98	-	-	-
0300	62.16	61.15	58.63	55.51	61.35	67.12	-	-	89.00	69.49	55.02	51.33	59.48	-	-	-
0400	59.36	58.77	58.40	57.03	60.14	66.86	-	-	96.98	68.84	54.20	47.81	57.38	-	-	-
0500	60.96	57.52	56.21	55.84	59.91	67.38	-	-	100.22	71.88	56.38	49.63	58.22	-	-	-
0600	59.98	59.20	57.48	57.57	59.90	69.25	-	-	76.77	74.40	55.47	51.69	57.66	-	-	-
0700	59.87	55.69	57.66	57.41	60.51	70.51	-	-	95.51	72.48	56.29	48.98	55.41	-	-	-
0800	62.34	56.66	56.95	57.05	62.80	57.51	-	-	87.32	70.29	55.51	51.52	57.84	-	-	-
0900	59.45	56.66	58.45	58.42	68.58	67.97	-	-	80.88	68.88	52.91	50.71	58.88	-	-	-
1000	61.11	59.33	75.63	56.91	54.88	68.38	-	-	77.08	68.12	51.39	42.42	57.23	-	-	-
1100	63.09	60.90	91.05	58.92	50.54	66.15	-	-	76.61	65.92	51.86	48.72	48.85	-	-	-
1200	58.84	57.40	89.86	61.23	50.89	58.38	-	-	77.28	27.17	54.84	50.63	49.13	-	-	-
1300	62.32	59.34	88.98	57.72	53.98	54.04	-	-	77.09	56.30	53.92	55.36	44.32	-	-	-
1400	57.68	58.98	70.05	61.17	56.66	55.36	-	-	66.82	x	48.31	57.33	48.96	-	-	-
1500	55.98	58.58	61.45	52.65	57.07	54.71	-	-	70.40	59.33	49.87	51.10	-	-	-	-
1600	59.48	59.05	60.22	56.43	67.52	52.48	-	23.98	74.39	22.53	47.37	52.02	-	-	-	-
1700	57.38	53.50	59.90	56.16	67.25	54.04	-	17.81	73.76	23.35	47.77	50.95	-	-	-	-
1800	58.22	58.75	59.85	56.73	69.47	53.58	-	31.75	71.98	34.34	48.03	50.94	-	-	-	-
1900	57.66	58.23	60.14	56.40	68.46	52.76	-	62.52	75.80	53.88	45.18	49.98	-	-	-	-
2000	55.41	58.16	61.20	57.08	71.24	53.63	-	84.74	74.29	54.55	47.42	49.07	-	-	-	-
2100	57.84	60.16	58.80	60.02	71.68	53.65	-	23.72	73.20	55.40	48.00	50.72	-	-	-	-
2200	58.88	59.20	59.52	60.62	65.04	53.77	-	54.32	72.68	54.30	49.24	49.16	-	-	-	-
2300	57.23	59.28	59.52	59.87	70.22	51.66	-	60.92	70.07	51.05	49.83	51.52	-	-	-	-
2400	56.40	59.28	59.52	59.87	70.22	51.66	-	60.92	70.07	51.05	49.83	51.52	-	-	-	-
Peak Concentration	89	90	93	89	91	91	-	-	100.22	-	97	97				
Max. Hourly Average	63.09	61.15	91.05	61.23	71.68		-	-	100.22	-	56.38	57.33				
[illegible] rage	[illegible]	16	52	00	74	41	24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Stack Opacity (%)

x Stack gas system down

DATE TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	-	-	-	-	-	-	-	-	-	-	70.25	70.25	51.02	64.88	
0200	-	-	-	-	-	-	-	-	-	-	67.20	67.20	48.90	62.94	
0300	-	-	-	-	-	-	-	-	-	-	67.15	67.15	47.62	61.44	
0400	-	-	-	-	-	-	-	-	-	-	64.83	64.83	51.37	61.01	
0500	-	-	-	-	-	-	-	-	-	-	68.29	68.29	53.04	63.33	
0600	-	-	-	-	-	-	-	-	-	-	72.07	72.07	49.93	62.41	
0700	-	-	-	-	-	-	-	-	-	-	68.15	68.15	51.27	58.20	
0800	-	-	-	-	-	-	-	-	-	-	70.44	70.44	49.15	54.81	
0900	-	-	-	-	-	-	-	-	-	-	68.97	68.97	50.13	52.52	
1000	-	-	-	-	-	-	-	-	-	-	67.20	67.20	83.63	53.56	
1100	-	-	-	-	-	-	-	-	-	-	64.36	64.36	92.56	44.75	
1200	-	-	-	-	-	-	-	-	-	-	61.24	61.24	92.10	41.91	
1300	-	-	-	-	-	-	-	-	-	-	61.84	61.84	84.16	45.49	
1400	-	-	-	-	-	-	-	-	-	-	59.70	59.70	86.35	46.66	
1500	-	-	-	-	-	-	-	-	-	-	60.18	60.18	89.49	47.39	
1600	-	-	-	-	-	-	-	-	-	-	58.18	58.18	93.19	42.37	
1700	-	-	-	-	-	-	-	-	-	-	58.77	58.77	92.38	35.23	
1800	-	-	-	-	-	-	-	-	-	-	63.67	63.67	82.38	35.12	
1900	-	-	-	-	-	-	-	-	-	-	68.52	68.52	71.98	34.75	
2000	-	-	-	-	-	-	-	-	-	-	66.90	66.90	70.27	36.01	
2100	-	-	-	-	-	-	-	-	-	-	66.27	66.27	69.09	34.29	
2200	-	-	-	-	-	-	-	-	-	-	57.24	57.24	70.64	32.80	
2300	-	-	-	-	-	-	-	-	-	-	50.74	50.74	70.57	31.45	
2400	-	-	-	-	-	-	-	-	-	-	51.17	51.17	66.88	34.03	
Peak Concentration	-	-	-	-	-	-	-	-	-	-	100	100	100	100	
Max. Hourly Average	-	-	-	-	-	-	-	-	-	-	72.07	72.07	93.19	64.88	
24 Hour Average	-	-	-	-	-	-	-	-	-	-	61.64	63.89	69.50	47.39	

TOPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR DECEMBER
Stack Opacity (%)

Legend:
- Plant not running
* Stack gas system down
C Computer problems

% downtime = 0.04%

Hourly Averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0100	32.10	26.08	26.28	22.29	20.88	23.54	24.78	28.38	26	66.10	37.91	35.89	28.25	27.48	x	41.78
0200	33.50	25.70	24.96	23.16	21.22	22.72	24.18	28.02	27	64.63	36.70	34.70	26.04	26.86	x	40.88
0300	34.55	24.72	23.17	23.40	19.83	22.84	25.20	26.63	28	61.82	35.20	31.82	27.55	26.71	x	42.48
0400	37.02	24.41	21.81	22.41	19.88	23.11	24.83	25.56	26	61.41	40.56	31.04	26.30	26.05	x	38.95
0500	38.19	24.09	22.61	23.28	20.92	23.50	24.32	24.89	26	58.53	41.66	31.79	27.19	24.88	x	37.72
0600	38.80	24.09	25.34	23.02	22.05	23.98	23.84	24.59	27	57.80	40.64	33.77	28.11	25.20	x	36.78
0700	38.11	25.43	22.94	25.44	20.66	23.38	25.49	25.38	28	54.75	40.41	31.35	29.81	25.45	x	35.72
0800	38.41	26.88	22.18	23.13	20.62	22.89	25.21	24.71	29	52.19	35.38	30.09	30.40	26.70	x	37.18
0900	C	31.55	17.88	23.41	20.88	23.70	24.13	24.66	30	49.16	37.96	28.76	26.99	25.55	x	39.91
1000	47.07	29.59	15.71	22.20	21.09	23.61	24.70	24.88	34.72	45.64	38.70	29.01	24.48	26.35	x	36.20
1100	44.83	28.66	16.30	23.13	20.68	23.37	24.72	23.30	37.29	45.02	35.20	30.55	24.66	25.55	x	32.74
1200	43.98	47.31	17.29	22.85	22.74	23.70	23.78	23.68	74.70	47.77	35.40	26.55	25.76	24.52	x	27.08
1300	28.64	86.73	19.19	22.20	21.80	24.11	23.68	24	-	42.04	33.55	27.72	26.65	24.85	x	25.94
1400	29.40	54.37	17.26	22.29	22.73	23.45	22.79	24	-	41.66	33.11	31.49	27.17	29.19	x	26.78
1500	29.05	28.28	19.88	21.36	22.41	23.56	24.65	24	-	42.31	33.16	33.33	26.98	28.30	x	24.23
1600	26.86	26.35	19.73	21.91	23.07	23.46	26.26	25	-	41.13	34.48	28.73	26.88	25.52	x	25.50
1700	23.79	26.58	22.41	21.55	23.83	24.05	25.41	26	-	42.66	34.33	28.84	26.30	22.77	x	23.55
1800	22.70	26.30	23.55	22.05	23.41	24.46	24.66	25	87.91	41.14	33.45	29.65	25.48	22.50	x	21.41
1900	24.39	26.98	21.35	21.36	24.18	25.55	25.17	24	88.13	39.38	33.22	30.75	26.00	23.46	x	22.59
2000	27.55	27.23	21.05	20.14	25.11	24.04	25.44	25	77.43	39.16	33.81	29.64	26.17	23.41	x	22.44
2100	26.94	27.89	21.59	21.53	27.47	24.79	24.20	25	64.17	38.43	34.72	30.26	25.80	24.01	x	22.89
2200	26.44	25.99	21.72	20.30	22.50	25.10	24.30	25	60.17	37.84	35.11	32.77	25.23	22.62	x	27.54
2300	26.43	25.57	22.70	19.57	22.92	24.74	24.71	26	56.52	38.65	33.72	30.59	24.94	22.91	50	29.95
2400	26.02	25.50	21.79	19.70	23.09	25.30	27.27	26	67.09	37.43	34.67	29.05	27.69	22.52	42	30.40
Peak Concentration	-	100	92	65	69	97	91	95	-	97	97	100	82	100	-	100
Max. Hourly Average	-	86.73	26.28	25.44	27.47	25.55	26.26	28.38	-	66.10	41.66	35.89	30.40	29.19	-	42.48

Stack Opacity (%)

x Stack gas system down

--	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rly Averages															
00	31.23	31	26.56	29.40	90	100	27.69	35.89	-	-	-	-	-	-	-
00	33.31	31	28.80	26.55	85	88.02	29.65	34.16	-	-	-	-	-	-	-
00	32.62	31	28.66	30.38	65	66.58	32.91	32.77	-	-	-	-	-	-	-
00	33.18	40	29.81	29.36	60	56.55	31.82	29.55	-	-	-	-	-	-	-
00	31.85	33	29.93	28.11	55	51.24	27.64	26.27	-	-	-	-	-	-	-
00	31.66	31	30.38	26.61	50	46.40	31.20	25.88	-	-	-	-	-	-	-
00	31.84	30	30.05	26.28	45	48.23	28.50	27.10	-	-	-	-	-	-	-
00	33.18	30	30.38	25.83	45	46.88	27.59	27.33	-	-	-	-	-	-	-
00	31.40	29	30.34	24.84	45	43.07	27.20	32.79	-	-	-	-	-	-	-
00	29.53	29	30.42	24.09	80	41.48	27.80	-	-	-	-	-	-	-	-
00	34.40	29	30.38	24.59	90	38.27	28.45	-	-	-	-	-	-	-	-
00	65.08	30	30.49	24.28	80	37.06	28.08	-	-	-	-	-	-	-	-
00	30.45	30	34.85	24.34	75	38.55	27.50	-	-	-	-	-	-	-	-
00	21.18	30	32.57	25.00	90	35.85	31.01	-	-	-	-	-	-	-	-
00	26.19	30	25.54	25.71	98	33.66	29.73	-	-	-	-	-	-	-	-
00	30.18	30	26.15	45.75	100	34.03	27.06	-	-	-	-	-	-	-	-
00	29.73	30	57.98	90.16	100	31.95	30.09	-	-	-	-	-	-	-	-
00	29.60	30	66.49	93.31	100	31.12	29.81	-	-	-	-	-	-	-	-
00	30.21	30	30.84	89.30	100	33.27	30.73	-	-	-	-	-	-	-	-
00	29.21	29	26.10	89.83	100	36.68	28.77	-	-	-	-	-	-	-	78.36
00	29.99	29	24.74	89.98	100	34.88	28.63	-	-	-	-	-	-	-	81.52
00	31.38	29	30.59	90.28	100	31.10	27.38	-	-	-	-	-	-	-	91.34
00	31.16	29	28.65	90.02	100	30.32	28.49	-	-	-	-	-	-	-	56.47
00	31.08	29	33.29	90.39	100	27.93	33.07	-	-	-	-	-	-	-	77.09
Concentration	100	96	100	100	100	100	98	-	-	-	-	-	-	-	-
Hourly Average	65.08	40	66.49	93.31	100	100	33.07	-	-	-	-	-	-	-	-
Average	32.07	30.38	30.93	48.52	81.38	43.00	29.20	-	-	-	-	-	-	-	-